ASSOCIAÇÃO KEYNESIANA BRASILEIRA

# BRAZILIAN KEYNESIAN REVIEW



ISSN 2446-8509

**Volume 9. n. 1, 1st Semester/2023**

# BRAZILIAN KEYNESIAN REVIEW

A Brazilian Keynesian Review é um periódico científico criado e mantido pela Associação Keynesiana Brasileira (AKB).

The Brazilian Keynesian Review (BKR) is a scientific journal created and maintained by the Brazilian Keynesian Association (AKB).



Brazilian Keynesian Review - www.braziliankeynesianreview.org
Associação Keynesiana Brasileira - www.associacaokeynesianabrasileira.org

**BRAZILIAN**
**KEYNESIAN**
**REVIEW**

## EXPEDIENTE

A Brazilian Keynesian Review (BKR) é um periódico científico criado e mantido pela Associação Keynesiana Brasileira (AKB) e tem como objetivo publicar e divulgar estudos inéditos, teóricos e aplicados, sobre Economia Keynesiana e áreas afins. Os artigos devem ser submetidos à apreciação da revista por iniciativa de seus autores ou a convite do Editor. As deliberações editoriais serão pautadas exclusivamente por critérios de excelência acadêmica, tendo por base pareceres emitidos por especialistas, isto é, os artigos submetidos seguem avaliação cega pelos pares e, uma vez aprovados, serão publicados segundo sua ordem de aprovação.

A BKR adota uma orientação editorial pluralista, abrindo-se às diferentes áreas de pesquisa, desde que as contribuições apresentem interface com a Economia Keynesiana, tais como as abordagens Institucionalista, Estruturalista ou Evolucionária. A BKR tem periodicidade semestral e acesso *online* irrestrito. Os trabalhos são publicados em português ou em inglês. A revista é comumente estruturada em até três partes. A primeira contém artigos acadêmicos na forma tradicional. A segunda parte contempla artigos mais curtos que tratam da conjuntura econômica brasileira ou mundial. Por fim, a BKR também passa a incorporar uma seção especial com resenhas de livros recentemente publicados e outras publicações de interesse da Associação Keynesiana Brasileira, desde que aprovados pelo Comitê Editorial da Revista.

O Corpo Editorial da revista é composto por um editor, dois coeditores e um Comitê Editorial. O Corpo Editorial é composto pelo Editor, Hugo Iasco-Pereira, e outros quatro Coeditores, a saber, Rafael Ribeiro, Caio Vilella, Fabrício José Missio e Luiz Fernando Rodrigues de Paula. Além disso, a revista ainda conta com a assessoria de um Comitê Editorial atualmente composto por dez membros, a saber, Anderson Tadeu Marques Cavalcante, Eliane Cristina Araújo, Fábio Henrique Terra, Gary Dymski, Gilberto Tadeu Lima, Giuliano Contento de Oliveira, Igor Rocha, Lauro Mattei, Marco Flávio da Cunha Resende, e Louis-Philippe Rochon.




Brazilian Keynesian Review - www.braziliankeynesianreview.org
Associação Keynesiana Brasileira - www.associacaokeynesianabrasileira.org

# EDITORIAL

A editoria da Brazilian Keynesian Review (BKR) tem o prazer de anunciar que um novo número da BKR (Número 1, Volume 9) está disponível gratuitamente no site da revista (www.braziliankeynesianreview.org). A BKR é uma iniciativa da Associação Keynesiana Brasileira (AKB) que visa a publicação e divulgação de estudos teóricos e aplicados da Economia Keynesiana e áreas afins. A revista adota uma perspectiva editorial pluralista, abrindo-se às diferentes orientações de pesquisa, desde que as contribuições apresentem uma interface com a Economia Keynesiana, tais como as abordagens Institucionalista, Estruturalista, Evolucionária e História do Pensamento Econômico. A BKR tem periodicidade semestral e acesso online irrestrito. Os artigos são publicados em português ou inglês. A primeira parte do número atual contém seis artigos acadêmicos, enquanto a segunda parte contém um texto sobre conjuntura econômica, e, por fim, a terceira parte possui duas resenhas de livros.

Charles Whalen abre a primeira parte deste número com o artigo: "*Post-keynesian institutionalism: contours and frontiers*". O texto apresenta e discute o Pós-keynesianismo institucionalista (PKI) desde a sua fundação, como uma ramificação do institucionalismo original e sua expressiva interface com Pós-keynesianismo em termos de fundamentos, metodologia, e política econômica. Whalen, notório autor da tradição PKI, apresenta os fundamentos da vertente PKI, guiando os leitores ao longo de sua evolução. O autor ainda evidencia a relação entre PKI e a obra de Fernando Cardim de Carvalho – patrono da Associação Keynesiana Brasileira. A contribuição deste texto reside em apresentar o PKI, como uma promissora ramificação dentro do Pós-keynesianismo, à comunidade pós-keynesiana do Brasil. A possibilidade de enriquecimento do pós-keynesianismo a partir das reflexões de autores institucionalistas é uma conclusão inexorável deste texto.

Na sequência, Luiz Alberto Marques Vieira Filho e Pedro Rossi assinam o texto: "Dívida pública e falta de sinergia entre o tesouro e o Banco Central do Brasil no período 2004/16". Dentro da literatura da Teoria Monetária Moderna (MMT), os autores analisaram a relação entre as políticas fiscal e monetária ou, de outro modo, a relação entre o Tesouro Nacional e o Banco Central entre 2004 e 2016. O argumento defendido no texto é que a relação recente entre o Banco Central do Brasil e o Tesouro Nacional foi marcada pela falta de sinergia no período 2004/2015, dificultando a obtenção de um perfil da dívida pública desejável – isto é, que reduz as possibilidades de ocorrência de fugas cambiais ou crises cambiais e monetárias. Neste contexto, o texto contribui para um melhor delineamento e

entendimento da relação entre política fiscal e monetária com vistas a conciliar o perfil da dívida pública brasileira com o desejado pelas autoridades políticas.

O terceiro artigo do número, "*A comment on the US student loan situation from a post-keynesian perspective*", foi escrito por Gustavo Pereira Serra. O texto analisa, do ponto de vista pós-keynesiano, a situação dos estudantes norte-americanos com dívidas obtidas a partir do financiamento estudantil. Serra, usando categorias minskyanas, mostra como o acúmulo de dívidas estudantis podem gerar resultados adversos no consumo das famílias e, logo, na atividade econômica. O autor ainda demonstra como o cancelamento das dívidas estudantis podem ter um efeito regressivo e redutor do multiplicador – à medida que essas dívidas são possuídas por pessoas de classe média e alta, em relação à redução da taxa de juros de empréstimo estudantis.

O quarto texto do número, "*Buen vivir in Ecuador: has the constitutional principle been reflected in structural change for development?*", é assinado por Rodolfo Aguiar e Cristina Fróes de Borja Reis. O objetivo dos autores foi investigar a dinâmica da economia equatoriana à luz da adoção do princípio constitucional, e ideal ecológico, representado pela noção de *Buen Vivir*. Os autores ressaltam que isso representou uma transformação institucional da relação do Estado com a sociedade, tomando os povos indígenas e as organizações ecológicas como protagonistas em um processo de diversificação produtiva puxadas por políticas públicas. Para tanto, os autores analisaram a estrutura produtiva equatoriana à luz desta nova orientação, concluindo que ela não foi suficiente para solucionar o problema da heterogeneidade estrutural do país. A contribuição do texto é fundamental para os outros países da região compreenderem a evolução de suas estruturas produtivas à luz de políticas econômicas adequadas, bem como as suas limitações.

O quinto texto do número, "O *debate sobre desenvolvimento na américa latina na ótica dos regimes de crescimento wage-led e profit-led*", foi escrito por Pedro Celso Rodrigues Fonseca e Ricardo Azevedo Araújo. O texto buscou aproximar as noções pós-keynesianas de regimes de demanda, presentes nos modelos neo-kaleckianos, aos modelos estruturalistas de Celso Furtado (estagnacionismo), e Maria Conceição Tavares e José Serra (crítica ao estagnacionismo furtadiano). Os autores identificaram pontos de convergência e de divergência entre as abordagens e, em especial, a prevalência de regime de demanda wage- ou profit-led nas diferentes abordagens estruturalistas. Os resultados dos autores são bastante interessantes e apontam para uma agenda profícua de convergência entre modelos pós-keynesianos e a literatura estruturalista latino-americana.

Por fim, a parte de artigos convencionais se encerra com o trabalho escrito por Beatriz Estulano Vieira, João Gabriel de Araujo Oliveira, e Renato Nozaki Sugahara, intitulado como "*A life-cycle intergenerational model considering social security*". O objetivo central do trabalho foi desenvolver um modelo de ciclo de vida intergeracional, considerando aposentadorias baseadas no sistema *pay-as-you-go* (PAYG). O modelo dos autores apresenta a análise do consumo ótimo em um sistema de duas classes e restrito à variação do capital. Os resultados do estudo indicaram uma solução ótima de equilíbrio do consumo e estoque de capital para ambas as classes, concluindo que o sistema PAYG interfere nos resultados, bem como a taxa de preferência no tempo por deixar ou não herança.

Em seguida, a seção de conjuntura econômica desta edição conta com o artigo "Economia brasileira: quatro décadas de "quase" estagnação", que foi escrito por Adalmir Marquetti e Alessandro Donadio Miebach. O texto discute as quatro décadas de quase estagnação e as possibilidades de retomada do crescimento econômico da economia brasileira. Os autores enfatizam que a retomada do crescimento econômico brasileiro perpassada pela organização de um consenso político compatível com a adoção de políticas públicas desenvolvimentistas e o abandono dos elementos centrais do neoliberalismo.

Por fim, o número conta ainda com duas resenhas de livros publicados recentemente. A primeira resenha, escrita por Fernando Ferrari Filho, discute o livro "*The Economics of John Maynard Keynes*", de autoria de Fábio Terra, publicado em 2023 pela editora *Routledge*. A segunda, escrita por Ricardo Summa, discute o livro "*Macroeconomics after Kalecki and Keynes: Post-Keynesian Foundations*", de autoria de Eckhard Hein, publicado em 2023 pela editora Edward Elgar. Ambos os livros possuem grande potencial de se tornarem referências nos cursos de graduação e pós-graduação de economia das principais universidades brasileiras em pouco tempo.

Os artigos desta edição têm uma grande variedade de contribuições, e contam com expressiva originalidade e diferentes abordagens. O corpo editorial da Brazilian Keynesian Review deseja a todos uma excelente leitura.

Hugo C. Iasco-Pereira, editor

Rafael Saulo Marques Ribeiro, coeditor

Caio Vilella, coeditor

Fabrício José Missio, coeditor

Luiz Fernando Rodrigues de Paula, coeditor

# EDITORIAL

The editorial board of the Brazilian Keynesian Review (BKR) is pleased to announce that a new BKR issue (Number 1, Volume 9) is freely available on the journal's website (www.braziliankeynesianreview.org). BKR is an initiative of the Brazilian Keynesian Association (AKB), which aims at publishing and disseminating theoretical and applied studies within Keynesian Economics and related areas. The journal adopts a pluralistic editorial orientation, covering different research themes, as long as the contributions present an interface with Keynesian Economics, such as Institutionalist, Structuralist, Evolutionary approaches, and History of Economic Thought. The BKR has a semiannual periodicity and unrestricted online access. Papers are published in either Portuguese or English. The first part of the current issue has six conventional academic papers, while the second contains one piece regarding current economic issues, and the last part has two book reviews.

Charles Whalen opens the first part of this issue with the article: "*Post-keynesian institutionalism: contours and frontiers*". The text presents and discusses the Post-Keynesianism Institutionalism (PKI) since its foundation, as a branch of the original Institutionalism and its expressive interface with post-Keynesianism in terms of fundamentals, methodology, and economic policy. Whalen, a remarkable author of the PKI tradition, lays out the fundamentals of the PKI strand, leading the readers through its evolution. The author also highlights the relationship between PKI and the work of Fernando Cardim de Carvalho – patron of the Brazilian Keynesian Association. The contribution of this text lies in presenting the PKI, as a promising branch within post-Keynesianism, to the Brazilian post-Keynesian community. The enrichment possibility of post-keynesian strand by institutionalist authors is an inevitable readers' conclusion of this text.

Luiz Alberto Marques Vieira Filho and Pedro Rossi sign the text: "Public debt and lack of synergy between the treasury and the central bank in Brazil in the period 2004/16". Following the Modern Monetary Theory (MMT) literature, the authors studied the relationship between fiscal and monetary policies or, in other words, the relationship between the National Treasury and the Central Bank between 2004 and 2016. They point out the lack of synergy in the relationship between the Central Bank of Brazil and the National Treasury as an important feature in the period 2004/2015, hampering the achievement of a desirable public debt profile – that is, one that avoid the chance of a capital flight fosters a currency crisis. In this context, the text contributes to a better outlining and understanding of the

relationship between fiscal and monetary policy with a view to improving the profile of the Brazilian public debt.

The third article of the current issue, "A comment on the US student loan situation from a post-Keynesian perspective", was written by Gustavo Pereira Serra. The text analyzes, from a post-Keynesian point of view, the situation of North American students with debts obtained from student loans. Serra, using Minskyan concepts, illustrates how the accumulation of student debts may generate adverse results in household's consumption and, therefore, in economic activity. The author demonstrated how the cancellation of student debts may worst income distribution and reduce the multiplier - as these debts are owned by middle and upper classes, in relation to the reduction of the student loan interest rate.

The fourth text of the issue, "Buen vivir in Ecuador: has the constitutional principle been reflected in structural change for development?", is signed by Rodolfo Aguiar and Cristina Fróes de Borja Reis. The paper aims to investigate the dynamics of the Ecuadorian economy regarding the adoption of the constitutional principle, and ecological ideal, represented by the notion of *Buen Vivir*. The authors point out that this represented an institutional transformation of the State's relationship with society, taking indigenous peoples and ecological organizations as protagonists in a process of productive diversification driven by public policies. For that, the authors analyzed the Ecuadorian productive structure under this new orientation perspective, concluding that it was not enough to solve the problem of the country's structural heterogeneity. The contribution of the text is essential for other countries in the region to understand the evolution of their productive structures in the light of appropriate economic policies, as well as their limitations.

The fifth text of this issue, "The debate on development in Latin America from the perspective of wage-led and profit-led growth regimes", was written by Pedro Celso Rodrigues Fonseca and Ricardo Azevedo Araújo. The text sought to approximate the post-Keynesian notions of demand regimes, present in the neo-Kaleckian models, to the structuralist models of Celso Furtado (stagnationism), and Maria Conceição Tavares and José Serra (critique of Furtadian stagnationism). The authors identified points of convergence and divergence between the approaches and, in particular, the prevalence of a wage- or profit-led demand regime in the different structuralist approaches. The authors' results are quite interesting and point to a very fruitful agenda of convergence between post-Keynesian models and Latin American structuralist literature.

Finally, the work written by Beatriz Estulano Vieira, João Gabriel de Araujo Oliveira, and Renato Nozaki Sugahara, entitled "A life-cycle intergenerational model considering

social security" closes the conventional articles part of this issue. The objective of the article was to develop an intergenerational life cycle model, considering retirements based on the pay-as-you-go (PAYG) system. The authors' model presents the analysis of optimal consumption in a two-class system and restricted to capital variation. The results of the study indicated an optimal equilibrium solution for consumption and capital stock for both classes, concluding that the PAYG system interferes with the results, as well as the time preference rate for leaving or not inheritance.

In its turn, the current economic section has the article "Brazilian economy: four decades of "almost" stagnation", which was written by Adalmir Marquetti and Alessandro Donadio Miebach. The article discusses the four decades of near stagnation and the possibilities to recover the Brazilian economic. The authors emphasize that the recovery of the Brazilian economic growth is permeated by the organization of a political consensus compatible with the adoption of developmentalist public policies and the abandonment of the central elements of neoliberalism.

Finally, the current issue also includes two reviews of recently published books. The first review, written by Fernando Ferrari Filho, discusses the book "The Economics of John Maynard Keynes", by Fábio Terra, published in 2023 by Routledge. The second, written by Ricardo Summa, discusses the book "Macroeconomics after Kalecki and Keynes: Post-Keynesian Foundations", by Eckhard Hein, published in 2023 by Edward Elgar. Both books have the potential to become an elementary read in undergraduate or graduate courses in a near future.

The articles in this issue have a wide variety of contributions, with remarkable originality and original contributions to the existing literature. The editorial board of the Brazilian Keynesian Review wishes everyone a pleasant reading.

Hugo C. Iasco-Pereira, editor

Rafael Saulo Marques Ribeiro, coeditor

Caio Vilella, coeditor

Fabrício José Missio, coeditor

Luiz Fernando Rodrigues de Paula, coeditor

# SUMÁRIO/SUMMARY

# POST-KEYNESIAN INSTITUTIONALISM: CONTOURS AND FRONTIERS*

**Charles J. Whalen†**

## Abstract

Post-Keynesian institutionalism (PKI)—a branch of the (original) institutionalist school that builds on common ground with post-Keynesianism—constitutes a robust tradition with secure foundations and broad methodological, analytical, and policy contours. Since its emergence in the 1980s, that tradition has consistently been ahead of the economic mainstream in shedding light on real-world problems. Drawing on the work of various heterodox economists—including John Kenneth Galbraith, Joan Robinson, Alfred Eichner, and Hyman Minsky—this article sketches the contours of today's PKI, including its attention to institutional characteristics of labor and product markets, features of industrial organization, interrelations of finance and macroeconomics, and long-term trends in capitalist development. The article also discusses how PKI relates to the post-Keynesian economics of Fernando Cardim de Carvalho and surveys the frontiers of PKI. The discussion of frontiers and the article's brief conclusion underscore post-Keynesian institutionalists' commitment to an ever-evolving body of theory and policy research.

**Keywords:** post-Keynesian institutionalism; John Kenneth Galbraith; Hyman Minsky; megacorps; financial instability; money manager capitalism; Fernando Carvalho

**JEL Code:** B52; E02; E12

* The author thanks Linda Whalen for helpful comments. This article builds on the introductory chapter in the author's edited volume *A Modern Guide to Post-Keynesian Institutional Economics* (Cheltenham: Edward Elgar, 2022).
† Research Fellow, The Baldy Center for Law and Social Policy, University at Buffalo, USA. E-mail: cwhalen3@buffalo.edu.

## 1. Introduction

At the end of 1982, Ray Marshall—an institutional labor economist—surveyed the analytical shortcomings and policy failures of neoclassical Keynesianism and Reaganomics at a meeting of the Association for Evolutionary Economics (AFEE). As he spoke, the unemployment rate in the United States stood at a postwar high of 10.8 percent, and the American economy had just experienced a decade of stagflation and several years of double-digit interest rates. The time was right, Marshall concluded, for an alternative economic analysis and policy agenda based on a synthesis of institutionalism and post-Keynesianism (Marshall, 1983).

Today, post-Keynesian institutionalism (PKI)—a branch of the (original) institutionalist school that builds on common ground with post-Keynesianism—constitutes a robust tradition with secure foundations and broad methodological, analytical, and policy contours. PKI was foreshadowed in the first half of the twentieth century by the affinity between John R. Commons and John Maynard Keynes, conceived in the mid-1970s, and began to take shape in the 1980s—first in *An Inquiry into the Poverty of Economics* (Wilber and Jameson, 1983), which focused on stagflation, and later in more dynamic economic analyses influenced in large part by the ideas of Hyman Minsky.[1] The tradition proved its worth during the global financial crisis of 2007–2009, by analyzing and addressing that period's tumultuous events far better than standard economics. Additional and more recent post-Keynesian institutionalist research demonstrates that PKI remains ahead of the economic mainstream in shedding light on contemporary problems, especially by analyzing long-term trends in capitalist development, including financialization, spreading worker insecurity, and rising inequality.

This article surveys the contours and frontiers of today's PKI. The section on contours includes a discussion of how PKI relates to the post-Keynesian economics of Fernando Cardim

[1] On the affinity of Commons and Keynes, see Whalen (2008, pp. 44-46); for a pathbreaking article envisioning PKI, see Peterson (1977); and for more on the origin and development of PKI, see Whalen (2022a, chapter 4), which includes a discussion of mid-20th century essays by Allan Gruchy that envisioned a synthesis of the economics of Keynes and the institutionalists. Also, for a recent survey of contributions to PKI, with extensive references, see Whalen (2020a).

de Carvalho.[2] The frontiers section, like PKI overall, reflects Minsky's (1996, p. xiii) observation: "As capitalism evolves, so too should economic theory and policy."

## 2. Contours of PKI

The contours of PKI can be organized into three categories: methodology, analysis, and public policy. The first category includes essential preconceptions (pre-analytic foundations) involving society, the economy, human behavior, values, and science. The second category includes key research themes and analytical constructs. The third category includes a perspective on the role of government and public policy. Each category is considered in turn, followed by a brief look at PKI in relation to the economics of Carvalho.[3]

### 2.1. Methodology

As a branch of institutional economics, PKI adopts the institutionalist definition of economics as well as its underlying methodology (or pre-analytic vision). According to most contemporary institutionalists, economics is "the science of social provisioning," a definition that originated with Allan Gruchy (1987, p. 21). This definition reflects an effort by institutionalists to offer a broader conception of economics than conventional economists, who focus on allocation of scarce resources—most often through market mechanisms (in fact, market allocation is the preferred method)—in a world populated by maximizing agents (individuals, firms, etc.) with unlimited wants.

The post-Keynesian institutionalist conception of society emphasizes interrelatedness and ongoing social change. The first of these emphases is referred to as *holism* (or *organicism*), which views social reality as a unified whole and holds that boundaries between the economy and other social spheres are always imprecise. Thus, while mainstream economics rests on an *atomistic* conception of society, which treats different social spheres as analytically separable and as operating according to their own laws and forces, PKI instead adopts the institutionalist view described by Gunnar Myrdal (1969, p. 10): "In reality, there are not economic, sociological, or

[2] In this article, I use a hyphen when referring to the "post-Keynesian" tradition, as did several of the literature's earliest contributors—and as does Lavoie (2022).
[3] While this article discusses PKI in relation to Carvalho, readers are encouraged to compare the PKI described here with overviews of institutionalism (such as Hodgson (2000) and Schneider (2019)) and post-Keynesianism (such as Dow (1991) and Lavoie (2022)). In my view, PKI resides at the intersection of both traditions.

psychological problems, but simply problems, … [all of which] are complex." Meanwhile, the institutionalist emphasis on ongoing social change is referred to as an *evolutionary* or *processual* perspective. In other words, while conventional economics focuses on conditions leading to a state of equilibrium, PKI views social systems as dynamic, ever-developing entities (owing to internal and external sources of change), and its economists are keenly aware that all social activity occurs in irreversible historical time.

By focusing on social provisioning, PKI casts a wider net than conventional economics when considering what constitutes "the economy." While PKI does not ignore market allocation of goods and services, it tends to give more attention to macroeconomic stabilization and distribution. PKI also goes further, not only by making room for analyses of production, social reproduction, and want creation, but also by recognizing that the market is only one type of human institution involved in shaping provisioning decisions (such as what is to be produced, how, and for whom), along with other institutions including households, governments, and indeed all the social institutions that together determine culture in its totality.[4]

In contrast to the conventional economic presupposition that market mechanisms are self-regulating, PKI rejects the notion that economic systems have any inherent tendency. Instead, PKI sees social institutions, not impersonal forces or universal laws of nature, as the balancing wheel of the economy. To be sure, post-Keynesian institutionalists accept that the price system may sometimes exhibit equilibrating tendencies, but they recognize that market dynamics can also involve cumulative causation (such as a tendency toward increasing fragility), path dependence, and hysteresis. In fact, PKI stresses that price adjustments often fail to effectively coordinate supply and demand at the microeconomic, macroeconomic, or supranational levels.[5] As a result, real-world markets cannot be counted on to correct themselves rapidly or fully, particularly in a downturn (when pessimism and risk aversion pervade the economic scene). Like both post-Keynesian economics and institutionalism, PKI emphasizes economic disequilibrium, instability, and that economies can stall at far below potential for extended periods.

[4] For perspectives on wants, want creation, and consumer choice consistent with PKI, see Brazelton and Whalen (in Whalen, 2011, pp. 32-33); Dugger (in Whalen 1996, pp. 38-39); Lavoie (1994); and Waller (2008).
[5] PKI stresses that price changes may not regulate markets not only because social institutions may be impervious to price changes, but also because supply and demand phenomena are often not independent. Moreover, pricing is itself a social process. See, for example, Eichner (1985); Jo (2016); and Whalen (1996, pp. 8-17).

PKI also has a broader and fundamentally different view of human behavior than conventional economics. Competition is the driving force in conventional economics: the coordinating function of prices at the heart of such economics requires workers to compete with other workers, companies to compete with other companies, and consumers to compete with other consumers. Competition even lurks behind the "voluntary" market transactions that are the showpiece of conventional economics; the two main parties in every transaction are driven by a competing motivation (buyers want the lowest price and sellers want the highest price). In contrast, by building on the methodology of institutionalism, PKI recognizes the full range of human motivation and interaction, including competition, conflict, compromise, cooperation, dependence, care, and nurturing. PKI also recognizes that power is rarely distributed equally and—as Wallace Peterson (1977) stressed in his AFEE presidential address—that power relations have a significant influence on human behavior and economic performance; thus, attention to power must be part of the work of PKI.

Moreover, what makes the post-Keynesian institutionalist view of human behavior fundamentally different from that of conventional economics is rejection of the extreme conception of rationality upon which the economic mainstream rests. As Marc Lavoie (1992, p. 11) writes, conventional economics is based on "a very peculiar type of rationality," which he calls *substantive* rationality. According to that rationality, humans maximize utility (or enterprise profits) in a manner consistent with an ability to predict all future events and fully assess all possible alternatives and consequences. In contrast, PKI—rooted in an extensive institutionalist and post-Keynesian literature—is based on what might be called *bounded* rationality (also called *procedural* rationality) (Lavoie, 1992, pp. 12, 51): people act on the basis of imperfect knowledge, using expectations shaped by culture and formed in a world of uncertainty; they rely heavily on habits and social conventions; lessons are learned through experience (which often involves unmet expectations); and ends and means are subject to constant reconsideration.[6]

[6] The type of rationality embedded in economic analyses can have major consequences. For example, the rationality embedded in PKI is consistent with unsustainable booms, financial crises, and severe downturns. In contrast, the rationality embedded in conventional economics is what led mainstream economists to reject as unimaginable the possibility of an event such as the global financial crisis of 2007–2009. The type of rationality embedded in PKI also leads to an approach to consumer choice that differs significantly from that of conventional economics; see Lavoie (1994). Also, see Lavoie (2022, pp. 16-17), which uses the term "model-consistent" rationality in place of substantive rationality and "environment-consistent" rationality in place of bounded rationality, and emphasizes that the former is associated with optimizing behavior, while the latter is associated with satisficing. In addition, see

The post-Keynesian institutionalist approach to values is multifaceted. It begins with a recognition that all economics is value laden. As Myrdal (1978, pp. 778-779) wrote: "Valuations are always with us. Disinterested research there has never been and can never be. Prior to answers there must be questions. There can be no view except from a viewpoint. In the questions raised and the viewpoint chosen, valuations are implied." In a similar manner, Joan Robinson (1970, p. 122) rejected the mainstream's notion of positive economics, and her approach to dealing with the matter is an essential part of PKI: "[An economist's attempt] to be purely objective must necessarily be either self-deception or a device to deceive others. A candid writer will make his [*sic*] preconceptions clear and allow the reader to discount them if he does not accept them."[7]

Another facet of the post-Keynesian institutionalist approach to values is recognition that, depending on the circumstances, individuals and groups make value judgments by using one (or more) of a variety of valuation standards. For example, we can value things on the basis of *scarcity* (platinum, for example), *usefulness* (either because the item in question—water, for instance—is needed to sustain life, or because it—perhaps a hammer, or even a particular public policy—is the right tool for a particular job), *expected utility* (which could be based on either a whim or a careful consideration of the happiness to be gained through acquisition and/or consumption), or *embodied labor or skill* (that is, the time, effort, and talent we or others put into constructing something). Market prices also serve as a valuation standard; prices are often in large part a measure of scarcity value, but prices are actually cultural products that may not fully reflect any of the measures of value just mentioned. In addition, people often disagree about values and valuation methods, which underscores the need for procedures to determine group or social values.[8] PKI recognizes these many different individual and group valuation standards and methods.[9]

---

Wunder (in Whalen 2022b, pp. 230-252), which stresses that acting rationally is not the same as engaging in optimization.

[7] In the last dozen or so years of her life, Robinson highlighted several themes that fall within the common ground shared by post-Keynesians and institutionalists. In addition to the value-laden nature of economic analysis, those themes include the economic importance of uncertainty, historical time, institutions (especially money and financial institutions), and the need to focus economics on addressing real-world problems. For example, see Robinson (1972; 1980).

[8] Commons's "reasonable value" concept offers one approach to social valuation; see Whalen (2022a, chapter 2).

[9] In much of the institutionalist literature, usefulness is considered "instrumental" valuation, though Commons called it "efficiency."

But PKI doesn't merely recognize such standards and methods. It also underscores the need to study them: to discover what are the operative values in a given situation; to learn how those values were formed and are evolving; and to identify the way values affect economic outcomes. In short, an additional facet of the post-Keynesian institutionalist approach to values is that the entire valuation process is part of the subject matter of economics (as are social influences on wants and human behavior).[10]

A final facet of the post-Keynesian institutionalist approach to values comes from the recognition that PKI is a policy science—aimed at *making the world a better place in which to live* by means of social and economic reform. Thus, PKI encourages economists to take a normative stance on matters of public policy. The only stipulation, of course, is that the value premises of such policy work should be stated "clearly and explicitly" (Myrdal, 1978, p. 779).

The last methodological category involves preconceptions about economics as scientific endeavor. In conventional economics, *prediction* is the preeminent goal, and much less attention is paid to the realism of assumptions (indeed, some mainstream economists argue that realistic assumptions are unimportant). In contrast, PKI joins institutionalists and post-Keynesians in holding that economics should focus on contributing to an *understanding* of actual processes of social provisioning, and in believing that the best way to achieve that end is to strive for theories grounded in realistic assumptions (recognizing, of course, that all theories are an abstraction from reality) as well as to regularly reevaluate theories to keep up with an ever-changing economic reality. Conventional economists often call their scientific methodology *instrumentalism* (Caldwell, 1980); the approach of PKI (as just described) is a mix of post-Keynesian *realism* (Lavoie, 2022, pp. 12-13) and institutionalist *pragmatism* (Gruchy, 1947, pp. 268-269; Whalen, 1992, pp. 63-64).

Consistent with post-Keynesian institutionalism's holistic conception of society, the scientific methodology of PKI can also be called systems thinking. When thinking in terms of interrelated systems and subsystems, post-Keynesian institutionalists often look at real-world cases and construct a theory by fitting individual cases into a larger pattern based on similarities and differences. This is sometimes described as pattern modeling (see, for example, Wilber and Harrison, 1978). In conventional economics, a high degree mathematical formalism is often

[10] For a further discussion of the valuation process, see Gordon (1984).

possible because economic institutions are downplayed as either troublesome (and thus, undesirable) "frictions" or inessential details. In contrast, during pattern modeling, the economists of PKI are willing to forego some formalism in pursuit of greater realism because they recognize that understanding the economy's institutional makeup (including, for example, key features of the economy's structure, as well as the institutionally determined processes that shape wages and prices) is essential to understanding real-world economic activity.

### 2.2. Analysis

At the level of economic analysis, we can further sketch the contours of PKI by identifying some main themes of post-Keynesian institutionalist research as well as key analytical constructs used in that work. PKI began in the United States and focused initially on the workings of capitalism in that country and other advanced industrial democracies. Since the mid-1990s, however, analyses grounded in PKI have been used to study economies around the world as well as to examine questions involving international economics. In fact, while Minsky's own work focused mainly on the United States, he stressed that capitalism comes in many varieties even as the current stage of advanced capitalist development (money manager capitalism) was becoming increasingly global.

Most PKI focuses on macroeconomic issues. In fact, *the* dominant, overarching theme of PKI has always been an effort to understand how economies operate for the purpose of achieving and sustaining broadly shared prosperity at the national level and extending that prosperity more widely. But that has not meant ignoring microeconomics; indeed, PKI has sought to incorporate, update, and extend the microeconomic insights of institutionalism and post-Keynesianism.

Thus, one post-Keynesian institutionalist theme involves an effort to draw on psychology and other disciplines to better understand the determinants of human economic behavior, both in general and with respect to particular economic issues. For example, Fernández-Huerga (2008; 2013) builds on psychology and neurosciences to highlight the influence of habits and social institutions upon human cognition, reasoning, and decision-making, and to outline post-Keynesian institutionalist models of human economic behavior and markets that are more realistic than those offered by conventional economics. In other work, Brazelton (2005; 2011) and Harvey (2006; 2012) build on the research of psychologists (in

addition to sociologists and neuroscientists in the case of Brazelton) to shed light on how the formation of expectations affects financial crises and exchange rates, respectively.[11]

Another theme focuses on the structure of industry. In that research, PKI builds on John Kenneth Galbraith's (1977) notion of a bimodal economy characterized by oligopolistic corporations—which Alfred Eichner (1985) called "megacorps"—and countless small businesses. Of course, the details of today's industrial structure differ greatly from those of the early 1980s when PKI emerged, but contemporary post-Keynesian institutionalists continue to find Galbraith's characterization full of relevant insights and useful as a point of departure for investigations of subsequent industrial evolution. For example, Galbraith's conception of a broadly bifurcated industrial landscape and his emphasis on the administered pricing practices of large corporations remain relevant, while his attention to corporate governance (which focused on the separation of ownership from control) provides a useful starting place for examinations of the rise of money manager capitalism.[12]

Post-Keynesian institutionalist attention to the bimodal structure of industry is also part of a larger theme involving the question: To what extent do product markets, labor markets, and financial markets—indeed, all markets—operate without a conventional, market-clearing price mechanism? Addressing that question puts attention on the role of price markups and other types of administered pricing used in product markets, but also on the broader reality of "imperfect markets with significant monopolistic elements" (Eichner and Kregel, 1975, p. 1309). It also highlights the stratified nature of labor markets, as well as the important role of social norms, institutions, and aggregate demand in determining employment, wages, and other aspects of the employment relationship.[13] In a similar manner, a look at financial markets highlights the fact that credit is a social institution, which depends heavily on culturally influenced expectations and the institutional details of a given regulatory setting. Moreover, no matter where we look, the economy is always evolving, so the answers today will often be quite different from those of

[11] For more on the importance of expectations in PKI, with special attention to the link between expectations and Commons's notion of "futurity," see Atkinson and Whalen (in Whalen, 2011, 53-74).
[12] Galbraith's work on industry structure, pricing, and corporate governance was built on an extensive institutionalist literature, which was later complemented by much post-Keynesian research.
[13] PKI also recognizes that labor market outcomes are shaped by an underlying (and sometimes not so hidden) struggle for income shares, a struggle which underscores the importance of power in economic life. (Indeed, all market outcomes are the product of income struggles.) In addition, PKI observes that market economies tend to operate at less than full capacity, which suggests that insufficient demand is a persistent problem.

a few decades ago. To be sure, there has been an overall trend over the past several decades toward greater price, wage, and interest-rate flexibility—owing to mounting pressure on corporations to maximize shareholder value, as well as increased globalization of production, decreased unionization, and new forms of financial intermediation (combined with a move away from relational financing)—but social and institutional determinants of market outcomes are often still more important than conventional economics acknowledges.[14]

Three other themes place an emphasis on finance: the centrality of money and finance; the evolution of finance; and the integration of finance and macroeconomics. The centrality of money and finance has been central to both institutionalism and post-Keynesianism from the start. PKI inherits a view of capitalism as a monetized economy, in which money and financial institutions play vital roles and the financial accumulation motive is the key driver of economic activity. Minsky described this view as a *Wall Street paradigm*, which emphasizes not only that production precedes marketplace exchange but also that finance precedes production.[15] In PKI, that paradigm manifests itself in the effort to offer a *monetary theory of production*, a theory in which "money plays a central and indispensable role in explaining the process of production" (Dillard, 1980, p. 265). The notion of the monetary circuit also appears in PKI because that circuit—the process by which debt is created, circulates, and is destroyed—corresponds to the dynamics of a monetary theory of production; see Girón (in Whalen, 2022b, pp. 216-229) and Tymoigne (2003.)[16]

A focus on the evolution of finance is important to PKI because economic change is often driven by developments and innovations in financial markets.[17] Some of this evolution is

[14] On the matter of price flexibility at the macroeconomic level, PKI also stresses that even fully flexible wages and prices would not guarantee full employment because of the effects of wage and price reductions on consumer demand and business expectations.

[15] Minsky (1975, pp. 57-58) contrasted his Wall Street paradigm with what he called the barter paradigm of conventional economics, an approach that assumes the central features of capitalism can be grasped without attention to finance, capital assets, and production.

[16] The centrality of money and finance in PKI also has implications for analytical tools and methods of economic research. From PKI's Wall Street perspective, much of the economy can be examined as a set of interconnected financial liabilities, cash-flow commitments, and balance sheets. For example, such a perspective is implicit in the "financial balances" model used by economists at Goldman Sachs to examine the US economic outlook. That model is constructed on a framework—focusing on the gaps between income and spending within the different sectors of the economy—championed by the late Wynne Godley, a Cambridge University economist and Levy Economics Institute colleague of Minsky during the 1990s.

[17] Indeed, as Minsky often stressed, financial structures are features of the economy especially prone to innovation—in response to both the demands of businesses and the entrepreneurialism of financing organizations.

cyclical in nature, and is reflected in post-Keynesian institutionalists' use of Minsky's (1975; 1982) *financial instability hypothesis*. It assumes that, over the course of a period of economic prosperity, conservative "hedge" financing gives way to riskier forms that Minsky called "speculative" and "Ponzi" financing (the latter is named after financial swindler Charles Ponzi), a development that increases financial instability and ultimately ends with a financial crisis, a resetting of economic expectations, and an eventual return to hedge financing.[18] Other financial evolution is longer term in nature and is reflected in post-Keynesian institutionalists' attention, for example, to innovations such as shadow banking (including off-balance-sheet financing) and the shift from relational ("lend and hold") financing to securitized ("originate and distribute") and arms-length financing.[19]

Attention to the integration of finance and macroeconomics also builds on the analytical construct of the financial instability hypothesis, which provides a foundation for post-Keynesian institutionalist analyses of business cycles. Recognizing Wesley Mitchell's (1941, p. ix) observation that "each new cycle presents idiosyncrasies," PKI does not offer a single explanation for all cycles. Still, such economists often find it useful to draw insight from the financial instability hypothesis, which leads most directly to an investment theory of endogenously generated cycles and gives attention to the challenges of coordinating short-term financing (and position taking) with expensive and durable capital assets.

As a result of many decades of institutionalist and post-Keynesian research on finance and macroeconomics, PKI has inherited not just a perspective oriented toward endogenously generated business cycles. It has also assimilated three presuppositions, which are related both to that cycle perspective and to each other: (1) the money supply responds to credit creation, which means the money supply is endogenous; (2) aggregate demand is the main force determining output and employment in both the near term and long term, since the economy's near-term path affects the supply-side determinants of long-run growth (this is what post-Keynesians call the principle of effective demand; see Lavoie, 2022, p. 37); and (3) investment—which is heavily influenced by business expectations—determines saving, rather than the reverse

[18] The financial instability hypothesis is PKI's answer to the mainstream's efficient market hypothesis (which argues that financial markets are efficient and stable). It is with the financial instability hypothesis in mind that post-Keynesian institutionalists often echo Minsky's pithy statement, "Stability is destabilizing."
[19] Post-Keynesian institutionalists have for decades drawn attention to the financial and economic risks associated with securitization and financial derivatives; see, for example, Minsky (1986a) and McClintock (1996).

(again, see Lavoie, 2022, p. 37). Moreover, since the run-up to the global financial crisis of 2007–2009, post-Keynesian institutionalists have used insight from the financial instability hypothesis to highlight household financial insecurity as well as to bring household financing and consumer indebtedness into analyses of the relationship between finance and macroeconomics. Much of this work—which goes well beyond that of Minsky—stresses that widening income inequality is a driving force behind household indebtedness, and that such inequality is both a consequence of and contributor to macroeconomic instability (see, for example, Brown (2008); Kaboub, Todorova, and Fernandez (2010); Scott and Pressman (2019); and Tymoigne (2007)).[20]

A final theme involves examination of long-term trends in capitalist development, with special attention to emergence and evolution of the current economic stage, which developed in the early 1980s and Minsky called *money manager capitalism*.[21] Today, this represents perhaps the central focus of PKI—one that not only connects PKI with some of institutionalism's oldest themes (including attention to stages of history, the legal foundations of economic systems, and overall socioeconomic evolution), but also places its attention on some of the most pressing contemporary issues (including financialization, worker insecurity, and rising inequality). Moreover, what has emerged through attention to this theme is an analytical construct—a (finance-driven) theory of capitalist development rooted in compatible aspects of work by Veblen, Commons, Schumpeter, and Minsky (see, for example, Whalen, 2001)—that has been used to study and explain various facets of the contemporary socioeconomic system in an integrated manner.[22] In fact, while there is more analytical work to be done to better connect capitalism's cyclical and long-term trends, post-Keynesian institutionalists researching cyclical

[20] PKI has also adapted and extended the instability hypothesis into other areas rarely examined by Minsky, including global markets and developing economies (see, for example, Wolfson (2002) and Tavasci and Toporowski (2010), respectively).

[21] For illustrative discussions of money manager capitalism—a concept that contemporary scholars apply beyond Minsky's focus on the United States—see, for example, Correa (2014); Jo and Henry (2015); Liang (in Whalen, 2011, 179-201); Minsky and Whalen (1996); Prasch (2014); Tymoigne and Wray (2014); and Zalewski (2002).

[22] According to PKI, money manager capitalism is an era driven by institutional investors and the pursuit of shareholder value, which has hollowed corporations, contributed to globalization of supply chains, slowed technological progress, increased worker insecurity, intensified inequality of income and wealth, contributed to financial fragility, and exacerbated macroeconomic instability (see, for example, Whalen, 2020b). Exploring, applying, and advancing the theory of capitalist development in post-Keynesian institutionalism is a research project that requires and incorporates investigations into a wide range of subjects, including corporate decision-making, industry structure, labor, finance, law, and macroeconomics. On the co-evolution of law, industry, and finance that produced money manager capitalism (and the stages preceding it), see, for example, Atkinson (2010) and Atkinson and Whalen (in Whalen, 2011, 53-74).

issues have increasingly incorporated work on capitalist development, and vice versa (see, for example, the various contributions to Whalen (2011)).

### 2.3. Public policy

PKI rejects both *laissez faire* and the mainstream notion that government action is appropriate only in instances of market failure. Instead, PKI rests on the notion of the *creative* state. According to that view, laissez faire is impossible: there is no such thing as a free market. PKI views the government as deeply and unavoidably involved in shaping the economy by fashioning property rights and institutions, and by making and enforcing rules that are always evolving.[23] Moreover, it is not enough to say that government must foster competitive markets; in the real world, market economies can take a variety of forms—government is regularly called on to determine the appropriate nature and scope of competition.[24] In fact, PKI recognizes that government's creative effort can be constructively directed toward a variety of conceptions of efficiency (including, for example, allocative, macroeconomic, or adaptive efficiency) and that public policy is often shaped by other considerations as well (such as social justice).

Since institutions are the true balancing wheel or coordinating mechanism of an economy, public policy takes on special significance in PKI. As Minsky (1986b, p. 7) writes, this means that economic policy "must be concerned with the design of institutions as well as operations within a set of institutions." Moreover, policy can change an economy, but economies also evolve because of other internal and external forces. Given the reality of an ever-changing economy, "There is no magic economic [policy] bullet; no single program or particular reform that will set things right forever" (Minsky, 1986b, p. 293). As the economy evolves, so too must public policy.

---

[23] As institutional economist Warren Samuels (1989) stressed, making and enforcing an ever-evolving set of rules (in response to competing claims and interests) is a creative, not a corrective, endeavor. Allan Schmid (1999, p. 233), Samuels's colleague, added that the notion of government *versus* markets is misguided; it's always "government, property, markets…in that order." The institutionalism of Samuels and Schmid—which provides a foundation for PKI—rests on the work of Commons (1924; 1934, p. 882), who emphasized that American capitalism is governed by "judicial sovereignty" in that the Supreme Court ultimately decides the constitutionality of law and public policy: "The Constitution is not what it says it is—it is what the Court says it is" (Commons, 1934, p. 697).

[24] The role of government in shaping competition is a key message of Commons (1924). In addition, the state shapes more than just institutions; it also plays a role in shaping—and then determining and acting upon—community preferences.

PKI stresses the importance of studying existing policy institutions and government practices to understand how they function and evolve. But PKI also calls on economists to reimagine those institutions and practices with the aim of achieving socioeconomic reform that improves economic performance and advances the public interest. In other words, post-Keynesian institutionalists should study *what is*, but should also incorporate into their work a vision of *what ought to be* (as long as they are explicit about that vision and the values upon which it rests).[25] And, of course, the two types of research are not mutually exclusive; understanding things *as they are* provides a vital starting point for reform initiatives.[26]

The following are some areas in which post-Keynesian institutionalists have often sought to identify promising reform proposals and innovative policy options:

a. Achieving and sustaining full employment without high inflation;[27]

b. Reducing economic insecurity and income inequality;

c. Supervising and regulating financial markets;[28]

d. Shoring up automatic economic stabilizers;

e. Attending to societal needs by looking at not only the *level* but also the *composition* of public expenditures;[29]

f. Fostering technological economic progress;

g. Curbing corporate power, extending workers' rights, and promoting economic democracy; and

h. Promoting social objectives in the face of financialization.[30]

---

[25] Zalewski (2019) provides an excellent discussion of several reform principles often found in the post-Keynesian institutionalist literature.
[26] For an important recent work on the evolution of law and corporate governance and its broad economic consequences, see Atkinson, Hake, and Paschall (2021). It offers a thoughtful starting point for considering the possibilities of (and challenges to) corporate reform in the face of financialization.
[27] For example, a guarantee of public-service employment for the unemployed has long been favored by many institutionalists, post-Keynesians, and post-Keynesian institutionalists.
[28] For PKI, financial regulation aims not only to protect consumers, but also to offset the tendency toward financial instability and crises.
[29] Robinson (1972) offers a forceful case for considering the content, not just the level, of output and employment.
[30] Attesting to the global significance of PKI is the fact that the policy issues listed above reflect problems facing economies worldwide.

In conducting their policy-oriented research, post-Keynesian institutionalists use a variety of empirical techniques, including statistical and comparative methods, system dynamics, and scenario analysis.

Of course, as Peterson (1977, p. 209) recognized, the state can be used for good or ill, and private power often has a hold on public power. In fact, drawing on the work of John Kenneth Galbraith, Peterson suggested that large corporations and other groups with economic power have long sought "to capture state power and subvert it to their private aims." This leads to the dark side of the creative state, which James K. Galbraith (2008, written at the suggestion of his father, John Kenneth Galbraith) calls the predator state.

According to James K. Galbraith (2008, p. 147), public-sector predation occurs when economic and political pressure from the private sector results in government officials who do not recognize the public interest and instead manage the public sector to serve private interests. In a predatory regime, he explains, the people in charge "have friends, and enemies, and as for the rest of us—we are the prey." It comes as no surprise that decades of financial-sector deregulation constitute one illustration of public-sector predation offered by Galbraith: Money manager capitalism did not just emerge and spread on its own; it was helped along as financial elites used their influence to shape public policies in ways that furthered their own private interests.[31] Recognizing, exploring, and devising ways to curtail the predatory side of the state, which has become more visible and consequential in the money manager era, are essential aims of contemporary PKI.[32]

### 2.4. PKI and Carvalho

Recognizing the important contributions of Fernando Cardim de Carvalho to post-Keynesian economics and to heterodox economics in Brazil, this section on the contours of PKI closes with a discussion of how PKI relates to the post-Keynesianism of Carvalho. Of course, we must give attention to common ground between Carvalho's economics and PKI, but we begin by describing how a look at his research helps us understand PKI in relation to post-

[31] For an extensive discussion of the policy-driven dimensions of wage suppression and inequality in the United States, see Mishel and Bivens (2021).
[32] The tension between the constructive potential of the creative state and the dark forces of predation is inescapable; the state is inevitably a terrain in which competing groups "assert the legitimacy of their rights and freedoms" (Brown, 1992, p. 13).

Keynesian economics overall. Post-Keynesianism has long been recognized as having several strands, and Carvalho tried from the start of his career to bring clarity and coherence to the tradition. His efforts at clarity and coherence are both relevant to understanding PKI.

To bring *clarity* to post-Keynesianism, Carvalho (1984) identified five different approaches to post-Keynesian theory, each with its own perspective on evolutionary economic processes over time. They are: 1) the Garegnani/Eatwell approach,[33] which focuses on long-run equilibrium positions described as static centers of gravity; 2) the Kaldor/Pasinetti approach, which sees long-run growth rates as moving centers of gravity; 3) the Kaleckian approach, which focuses on short-run cycles around a long-run trend; 4) the Davidson/Kregel/Minsky approach, which emphasizes historical time and uncertainty; and 5) the Shackle approach, which also emphasizes historical time, but concentrates on the moment of decision-making.[34] The PKI tradition is grounded solidly in the historical time approach (number four above), so Carvalho's categorization helps shed light on the nature of the intersection between post-Keynesianism and PKI.[35]

The post-Keynesian historical time approach is also the approach most in line with the view of Keynes, who famously wrote, "In the long run, we are all dead" (Keynes, 1923, p. 80). As Carvalho (1984, p. 230) writes:

> The alternative starting point [of Keynes] states that life happens in some sort of "short run." The investment process, in particular, *freezes* expectations formed under uncertainty conditions into *long run* data. This destroys the stability required by equilibrium situations to become gravity centers. Therefore, there is no separate space/time in which long run forces assert themselves independently of short run occurrences. Short run acts permanently imprint their character in the long run paths, making it impossible to develop a theory of the latter that is invariant to what happens

[33] That approach is also often considered Sraffian or neo-Ricardian.

[34] Carvalho (1984) recognizes that Robinson and Eichner do not fit neatly into his categorization. Although they both stressed the importance of historical time, each occasionally devoted some attention to long run forces, albeit as dynamic potentialities rather than static tendencies. (In the same article, Carvalho also suggests that some of Kalecki's work was of a similarly eclectic nature.)

[35] Unlike the Davidson/Kregel/Minsky approach, the Shackle approach is less than a perfect fit with PKI because of Shackle's "absence of references to the social environment that surrounds each individual, [and that shapes] his limits and interrelations with other individuals" (Carvalho, 1984, p. 227). In fact, elsewhere Carvalho (1983, pp. 269-270) describes the Shackle approach as "radically individualistic and subjectivistic" like that of Austrian economics. This is not the case in PKI. And on this matter, what Carvalho (1992, p. 29) wrote about Keynes is equally true of PKI: Although Keynes's economics "had to take into consideration 'motives and behaviors' of individuals, it was not conducive to an extreme methodological individualism along Austrian lines. Order and social organization are essential elements of Keynes's vision, as much as uncertainty and individual freedom. To a large extent one can see Keynes's economics as an attempt to reconcile these two elements, order and freedom, without surrendering to either one of them."

> in the former. … The economy has, therefore, to be approached in terms of historical time.

Since what Carvalho describes in that passage is also the viewpoint of PKI, his effort to bring clarity to post-Keynesianism doesn't merely help us understand PKI in relation to that tradition: it also underscores attention to historical time as a foundational commonality of PKI and the economics of Keynes.

Carvalho's effort to bring *coherence* to post-Keynesianism sheds further light on that tradition's correspondence with PKI. In *Mr. Keynes and the Post Keynesians*, Carvalho (1992, pp. 3-13) brought coherence to post-Keynesianism by using Keynes's starting point as his own. After publication of *The General Theory*, conventional economists tried to take Keynes's insights and observations and interpret them in the context of standard theory—as though Keynes shared "the same premises as orthodox economics" and differed only in terms of "the value of the relevant parameters." But Carvalho stresses that Keynes had a different aim: to devise an alternative to the inadequate *foundations* of mainstream economics and construct a more realistic economic theory upon that new groundwork. In other words, Keynes wanted an "alternative paradigm"—rooted in a distinctly different pre-analytic vision—one more appropriate for use when analyzing the monetary production economies of the capitalist world. *Mr. Keynes and the Post Keynesians* presents Carvalho's interpretation of that alternative paradigm, and the agreement with PKI is striking.

One way to underscore the correspondence between Carvalho's post-Keynesianism paradigm and PKI is to observe that much of PKI is inspired by two AFEE presidential addresses delivered in the 1970s: Peterson (1977) and Dillard (1980). Peterson identified several common emphases in institutionalism, Keynes, and the post-Keynesians, including historical time, uncertainty, ongoing economic change, institutions (especially money and financial institutions), power relations, endogenous capitalist instability, and the need for public action to stabilize the economy and address concentrations of wealth and power. Then Dudley Dillard stressed that Keynes and major institutionalists, including Thorstein Veblen and Wesley Mitchell, shared a common research goal: to produce a monetary theory of production as an alternative to conventional economics. While the goal and emphases identified by Peterson and Dillard are evident in the contours of PKI laid out in this article, they are also manifest in Carvalho's classic book (Carvalho, 1992).

Common ground between Carvalho's economics and PKI can likewise be seen by considering each of the following aspects of his work: the "principles" of a monetary economy, the incorporation of insights and concepts from Minsky's "financial Keynesianism," and the role of government. Carvalho's theory is built upon six principles (Carvalho, 1992, pp. 43-53), which stress the following features of capitalist economic processes: temporality (production precedes sale and finance precedes production), uncertainty, absence of a central coordinator, the liquidity of money, production by firms to accumulate money (wealth), and the differentiated powers of economic agents (with banks and firms in dominant positions regarding investment and production decisions). The same features are found in post-Keynesian institutionalist analyses of macroeconomics and capitalist development.[36]

The features just described lead Carvalho and post-Keynesian institutionalists to a macroeconomic theory in which effective demand plays a central role. For Carvalho (1992), Keynes's writings provide essential clues to the construction of such a theory, but Minsky also provides both Carvalho and PKI with vital insights and concepts. For example, Minsky—who wrote a book interpreting Keynes's *General Theory* and called himself a "financial Keynesian"—contributed the notion of a Wall Street paradigm (discussed above), a conception of the investment process (combining expectations and assessments of risk), and analyses of financial fragility and systemic crises, which are each incorporated into the post-Keynesianism of Carvalho (1992; 2015) as well as into PKI.[37]

On government and public policy, the post-Keynesianism of Carvalho and the overall thrust of PKI both reflect the shared aim of Keynes and Commons, which was to achieve a more humane and wisely managed form of capitalism. According to Carvalho, the goal of post-Keynesianism is to reform capitalist economies in a way that makes its institutions "more efficient and fair," consistent with Keynes's conservative goals of preserving private property, the market, and individual decision making, but also with his innovative intention of substituting

[36] The features highlighted by Carvalho are incorporated into the discussion of PKI above, but also see Whalen (2008; 2011).
[37] Carvalho, who regarded his post-Keynesian macroeconomics as an interpretation of Keynes's liquidity preference theory (Carvalho, 1992), described Minsky's financial instability hypothesis as "an elaboration of liquidity preference" (Carvalho, 2015, p. 105).

"conscious economic management" for the blind acceptance of unregulated markets (Carvalho, 1992, pp. 206, 220). Post-Keynesian institutionalists have often described the same type of goal.[38]

Carvalho's discussions of policy instruments and their use also correspond with what one finds in the post-Keynesian institutionalist literature. In *Mr. Keynes and the Post Keynesians*, Carvalho (1992, pp. 212-221) highlighted coordinated use of fiscal, monetary, and incomes policies to sustain aggregate output at full employment, reduce income inequality, control inflation, and accommodate the demand for money while preventing financial crises. In the more recent *Liquidity Preference and Monetary Economies*, Carvalho (2015, pp. 108-112) added a post-Keynesian strategy for preventing systemic financial crises. According to that strategy, which begins by recognizing that financial markets cannot depend on industry self-regulation or private-sector entities such as rating agencies, government regulators must monitor the entire financial system (not just banks) for systemic risks; control leverage and maturity mismatches between assets and liabilities; preserve margins of safety; and constantly update regulations in the face of incessant financial innovation and economic-system evolution. Of course, the details are always important when shaping policy, but in general post-Keynesian institutionalists would endorse the policy elements found in both of Carvalho's books.[39]

## 3. Frontiers

The methodological, analytical, and policy contours of PKI described in this article demonstrate that the tradition has accomplished much over the past few decades. But post-Keynesian institutionalists endeavor to keep up with an ever-changing economy. To that end, an international group of scholars has recently pursued a concerted effort to explore and even expand the frontiers of PKI.

### 3.1. *A Modern Guide to Post-Keynesian Institutional Economics*

In a research volume published in 2022, more than a dozen economists helped to advance PKI by contributing to *A Modern Guide to Post-Keynesian Institutional Economics* (Whalen, 2022b). The book's first section extended analyses and explorations of money manager

[38] In addition to the discussion on public policy in section 2.3 above, see Whalen (2008).
[39] For example, compare Carvalho's policy views (Carvalho, 1992; pp. 212-221; 2015, pp. 108-131) with the post-Keynesian institutionalist perspective outlined by Whalen (2010, pp. 249-255).

capitalism, including chapters on its emergence (by David Zalewski), the relationship between financialization and employment insecurity in the United States (by Avraham Baranes), and the shortcomings of the current era revealed by the coronavirus pandemic (by Yan Liang and Charles Whalen). The second section aimed to sharpen post-Keynesian institutionalism's concepts and methods, including chapters on social capital and civil society (by Asimina Christoforou), economic democracy (by Anna Klimina, who focuses on how that concept could be used to shape reform in economies of the former Soviet Union), the monetary circuit (by Alicia Girón, who applies that concept to Latin American development), and stock-flow consistent modeling (by Marc Lavoie).[40]

The final section of *A Modern Guide* proposes theories and syntheses with related heterodox traditions. The discussion of theories includes a post-Keynesian institutionalist framework for analyzing labor markets (by Eduardo Fernández-Huerga) and a theoretical explanation of the cyclical pattern of financial regulation (by Samba Diop). Other chapters highlight opportunities to synthesize PKI with feminist economics (by Anna Zachorowska-Mazurkiewicz) and ecological economics (by Charles Whalen).[41]

### 3.2. Analyzing and transcending precarity

A key topic at the frontiers of PKI is precarity. Today, many use the term "precarity" in reference to the serious problem of employment insecurity in the age of money manager capitalism; but rapidly rising prices can also create a precarious situation—especially for low-income households—and in recent years inflation has surged in many nations at a pace not seen since the early 1980s. Meanwhile, the existential threat posed by global warming represents the most fundamental form of precarity. Going forward, these are just some of the dimensions of precarity that deserve to be analyzed by post-Keynesian institutionalists and addressed by nations and the international community.[42]

[40] Stock-flow consistent models, which derive mainly from the work of Wynne Godley, embody a flow-of-funds analysis that connects them to institutionalism and PKI. A similar focus on balance sheets is also found in the neo-chartalist economics that some today call modern monetary theory, which at least partly overlaps with PKI owing to a shared interest in detailed analyses of monetary institutions and processes (Lavoie, 2022, p. 44).

[41] The chapter by Zachorowska-Mazurkiewicz builds partly on the gendered post-Keynesian institutionalist analysis of Todorova (2009).

[42] For examples of constructive recent work on inflation from perspectives consistent with post-Keynesian institutionalism, see Jo (2022); Galbraith (2023); and Watkins (2023).

## 4. Conclusion: PKI in an ever-changing world

Confronted with the reality of an ever-changing world, PKI must always be a work in progress. But post-Keynesian institutionalists embrace that inevitability. Their work to date indicates not only adeptness in the face of socioeconomic evolution, but also an ambitious agenda for further research.

Although PKI began in the United States, it has quickly become a research tradition with global reach. Its concepts and analyses are used by economists in many parts of the world, and have been applied to advanced market economies, emerging economies, and even nations practicing state capitalism.[43] That attention reflects a growing recognition of the global scope of the issues that have long been central to PKI, including financialization, financial instability, economic inequality, and worker insecurity. The attention is also a consequence of efforts by post-Keynesian institutionalists to explore and advance their tradition's research frontiers, which has included forging links to other economic traditions and taking on vital issues often neglected by many economists, including environmental degradation and climate change.

Economic systems are social entities, not natural systems. Thus, the future, regarding both economics and the economy, is in our own (collective) hands. By studying real-world social provisioning and the avenues available for institutional reform, and by aiming to develop a robustly international research program, post-Keynesian institutionalism contributes constructively to our fashioning of that future.

## References

Atkinson, Glen. (2010), "The Legal Foundations of Financial Capitalism." *Journal of Economic Issues* 44(2): 289-299.

Atkinson, Glen, Eric R. Hake, and Stephen P. Paschall. (2021), *Evolution of The Corporation in the United States*. Cheltenham: Edward Elgar.

[43] In addition to the literature cited elsewhere in this article, see Girón (2018) and Bahtiyar (2020) for illustrations of PKI's global reach.

Bahtiyar, Görkem. (2020), "Theories of Crisis and the Great Recession: An Argument in Favor of Post-Keynesian Institutionalism." *Gazi İktisat ve İşletme Dergisi* 6(2): 130-146. https://dergipark.org.tr/tr/pub/gjeb/issue/54884/658430.

Brazelton, W. Robert. (2005), "Selected Theories of the Business Cycle in Terms of 'Econsochology.'" *Journal of Economic Issues* 39(2): 527-533.

Brazelton, W. Robert. (2011), "Neuroscience, Psychology, Sociology with Relevance to Economic Analysis." Working Paper, Department of Economics, University of Missouri, Kansas City. Prepared for the annual meeting of the Association for Institutional Thought.

Brown, Christopher. (2008), *Inequality, Consumer Credit, and the Saving Puzzle*. Cheltenham: Edward Elgar.

Brown, Douglas. (1992), "The Capitalist State as a Terrain of Rights." In *The Stratified State*, edited by William M. Dugger and William T. Waller, 13-34. Armonk, New York: M.E. Sharpe.

Caldwell, Bruce J. (1980), "A Critique of Friedman's Methodological Instrumentalism." *Southern Economic Journal* 47(2): 366-374.

Carvalho, Fernando J. Cardim. (1983), "On the Concept of Time in Shacklean and Sraffian Economics." *Journal of Post Keynesian Economics* 6(2): 265-280.

Carvalho, Fernando J. Cardim. (1984), "Alternative Analyses of Short and Long Run in Post Keynesian Economics." *Journal of Post Keynesian Economics* 7(2): 214-234.

Carvalho, Fernando J. Cardim. (1992), *Mr. Keynes and the Post Keynesians*. Aldershot: Edward Elgar.

Carvalho, Fernando J. Cardim. (2015), *Liquidity Preference and Monetary Economies*. London: Routledge.

Commons, John R. (1924), *Legal Foundations of Capitalism*. New York: Macmillan.

Commons, John R. (1934), *Institutional Economics: Its Place in Political Economy*. New York: Macmillan.

Correa, Eugenia. (2014), "Institutional Changes in Financial Crises: Lessons from Latin America." *Journal of Economic Issues* 48(2): 323-330.

Dillard, Dudley. (1980), "A Monetary Theory of Production: Keynes and the Institutionalists." *Journal of Economic Issues* 14(2): 255-273.

Dow, Sheila C. (1991), "The Post-Keynesian School." In *A Modern Guide to Economic Thought*, edited by Douglas Mair and Anne G. Miller, 176-206. Aldershot: Edward Elgar.

Eichner, Alfred S. (1985), *Toward a New Economics: Essays in Post-Keynesian and Institutionalist Theory*. Armonk, New York: M.E. Sharpe.

Eichner, Alfred S. and Jan A. Kregel. (1975), "An Essay on Post-Keynesian Theory: A New Paradigm in Economics." *Journal of Economic Literature* 13(4): 1293-1314.

Fernández-Huerga, Eduardo. (2008), "The Economic Behavior of Human Beings: The Institutional/Post-Keynesian Model." *Journal of Economic Issues* 42(3): 709-726.

Fernández-Huerga, Eduardo. (2013), "The Market Concept: A Characterization from Institutional and Post-Keynesian Economics." *American Journal of Economics and Sociology* 72(2): 361-385.

Galbraith, James K. (2008), *The Predator State*. New York: The Free Press.

Galbraith, James K. (2023), "The Quasi-Inflation of 2021-2022: A Case of Bad Analysis and Worse Response," Institute for New Economic Thinking, February 2. https://tinyurl.com/yc8m44jw.

Galbraith, John K. (1977), "The Bimodal Image of the Modern Economy." *Journal of Economic Issues* 11(2): 189-200.

Girón, Alicia. (2018), "Is China Living a Minsky Moment? Between the 'Lender of Last Resort' and the Chinese Shadow Financial System." *Journal of Economic Issues* 52(2): 445-454.

Gordon, Wendell C. (1984), "The Role of Institutional Economics." *Journal of Economic Issues* 18(2): 368-381.

Gruchy, Allan G. (1947), *Modern Economic Thought: The American Contribution*. New York: Prentice-Hall.

Gruchy, Allan G. (1987), *The Reconstruction of Economics*. New York: Greenwood Press.

Harvey, John T. (2006), "Psychological and Institutional Forces and the Determination of Exchange Rates." *Journal of Economic Issues* 40(1): 153-170.

Harvey, John T. (2012), "Exchange Rate Behavior During the Great Recession." *Journal of Economic Issues* 46(2), 313-322.

Hodgson, Geoffrey M. (2000), "What Is the Essence of Institutional Economics?" *Journal of Economic Issues* 34(2), 317-329.

Jo, Tae-Hee. (2016), "What If There Are No Conventional Price Mechanisms?" *Journal of Economic Issues* 50(2), 327-344.

Jo, Tae-Hee. (2022), "Post- Keynesian Institutionalism and Heterodox Microeconomics," PowerPoint Presentation, Association for Evolutionary Economics Annual Meeting, January 8.

Jo, Tae-Hee and John F. Henry. (2015), "The Business Enterprise in the Age of Money Manager Capitalism." *Journal of Economic Issues* 49(1), 23-46.

Kaboub, Fadhel, Zdravka Todorova, and Louisa Fernandez. (2010), "Inequality-led Financial Instability: A Minskian Structural Analysis of the Subprime Crisis." *International Journal of Political Economy* 39(1), 3-27.

Keynes, John Maynard. (1923), *A Tract on Monetary Reform*. London: Macmillan.

Lavoie, Marc. (1992), *Foundations of Post-Keynesian Economic Analysis*. Cheltenham: Edward Elgar.

Lavoie, Marc. (1994), "A Post Keynesian Approach to Consumer Choice." *Journal of Post Keynesian Economics* 16(4), 539-562.

Lavoie, Marc. (2022), *Post-Keynesian Economics: New Foundations, 2nd edition*. Cheltenham: Edward Elgar.

Marshall, F. Ray. (1983), "Comments on the Institutionalist view of Reaganomics." *Journal of Economic Issues* 17(2), 503-506.

McClintock, Brent. (1996), "International Financial Instability and the Financial Derivatives Market." *Journal of Economic Issues* 30(1), 13-33.

Minsky, Hyman P. (1975), *John Maynard Keynes*. New York: Columbia University Press.

Minsky, Hyman P. (1982), *Can "It" Happen Again? Essays on Instability and Finance*. Armonk, New York: M.E. Sharpe.

Minsky, Hyman P. (1986a), "Global Consequences of Financial Deregulation." *Marcus Wallenberg Papers on International Finance* 2(1), 1-19.

Minsky, Hyman P. (1986b), *Stabilizing an Unstable Economy*. New Haven: Yale University Press.

Minsky, Hyman P. (1996), "Foreword." In *Political Economy for the 21st Century*, edited by Charles J. Whalen, xi-xiii. Armonk, New York: M.E. Sharpe.

Minsky, Hyman P. and Charles J. Whalen. (1996), "Economic Insecurity and the Institutional Prerequisites for Successful Capitalism." *Journal of Post Keynesian Economics* 19(2), 155-170.

Mishel, Lawrence and Josh Bivens. (2021), "Identifying the Policy Levers Generating Wage Suppression and Wage Inequality." Economic Policy Institute Report, May 13, https://www.epi.org/215903.

Mitchell, Wesley C. (1941), *Business Cycles and Their Causes*. Berkeley: University of California Press.

Myrdal, Gunnar. (1969), *Objectivity in Social Research*. Middletown, Connecticut: Wesleyan University Press.

Myrdal, Gunnar. (1978), "Institutional Economics." *Journal of Economic Issues* 12(4): 771-783.

Peterson, Wallace C. (1977), "Institutionalism, Keynes, and the Real World." *Journal of Economic Issues* 11(2): 201-221.

Prasch, Robert E. (2014), "The Rise of Money Manager Capitalism and Its Implications for Economic Theory and Policy." *Journal of Economic Issues* 48(2): 559-566.

Robinson, Joan. (1970), *Freedom and Necessity*. London: George Allen and Unwin.

Robinson, Joan. (1972), "The Second Crisis of Economic Theory." *American Economic Review* 62(1/2): 1-10.

Robinson, Joan. (1980), "Time in Economic Theory." *Kyklos* 33(2): 219-229.

Samuels, Warren J. (1989), "Some Fundamentals of the Economic Role of Government." In *Fundamentals of the Economic Role of Government*, edited by Warren J. Samuels, 167-172. Westport, CT: Greenwood Press.

Schmid, A. Allan. (1999), "Government, Property, Markets…In that Order…Not Government versus Markets." In *The Fundamental Interrelationships between Government and Property*, edited by Nicholas Mercuro and Warren J. Samuels, 237-242. Stamford, Connecticut: JAI Press.

Schneider, Geoffrey E. (2019), "Contemporary Original Institutional Economics." *American Review of Political Economy* 14(1). https://doi.org/10.38024/arpe.210.

Scott, Robert and Steven Pressman. (2019), "Financially Unstable Households." *Journal of Economic Issues* 53(2): 523-531.

Tavasci, Daniela and Jan Toporowski, eds. (2010), *Minsky, Crisis and Development*. Basingstoke: Palgrave Macmillan.

Todorova, Zdravka. (2009), *Money and Households in a Capitalist Economy: A Gendered Post Keynesian-Institutional Analysis*. Cheltenham: Edward Elgar.

Tymoigne, Eric. (2003), "Keynes and Commons on Money." *Journal of Economic Issues* 37(3): 527-545.

Tymoigne, Eric. (2007), "A Hard-Nosed Look at Worsening US Household Finance." *Challenge* 50(4): 88-111.

Tymoigne, Eric and L. Randall Wray. (2014), *The Rise and Fall of Money Manager Capitalism*. London: Routledge.

Waller, William. (2008), "John Kenneth Galbraith: Cultural Theorist of Consumption and Power." *Journal of Economic Issues* 42(1): 13-24.

Watkins, John. (2023), "Corporate Power and the Return of Inflation." Paper delivered at the Association for Evolutionary Economics Annual Meeting, January 7, 2023.

Whalen, Charles J. (1992), "Schools of Thought and Theories of the State." In *The Stratified State*, edited by William M. Dugger and William T. Waller, 55-85. Armonk, New York: M.E. Sharpe.

Whalen, Charles J., ed. (1996), *Political Economy for the 21st Century*. Armonk, New York: M.E. Sharpe.

Whalen, Charles J. (2001), "Integrating Schumpeter and Keynes: Hyman Minsky's Theory of Capitalist Development." *Journal of Economic Issues* 35(4): 805-823.

Whalen, Charles J. (2008), "Toward 'Wisely Managed' Capitalism: Post-Keynesian Institutionalism and the Creative State." *Forum for Social Economics* 37(1): 43-60.

Whalen, Charles J. (2010), "An Institutionalist Perspective on the Global Financial Crisis." In *Macroeconomic Theory and Its Failings: Alternative Perspectives on the Global Financial Crisis*, edited by Steven Kates, 235-259. Cheltenham: Edward Elgar.

Whalen, Charles J., ed. (2011), *Financial Instability and Economic Security after the Great Recession*. Cheltenham: Edward Elgar.

Whalen, Charles J. (2020a), "Post-Keynesian Institutionalism: Past, Present, and Future." *Evolutionary and Institutional Economics Review* 17(1): 71-92.

Whalen, Charles J. (2020b), "Understanding Financialization." In *Alternative Approaches to Economic Theory*, edited by Victor. Beker, 185-206. London: Routledge.

Whalen, Charles J., ed. (2022a), *Institutional Economics: Perspectives and Methods in Pursuit of a Better World*. London: Routledge.

Whalen, Charles J., ed. (2022b), *A Modern Guide to Post-Keynesian Economics*. Cheltenham: Edward Elgar.

Wilber, Charles K. and Robert S. Harrison. (1978), "The Methodological Basis of Institutional Economics: Pattern Model, Storytelling, and Holism." *Journal of Economic Issues* 12(1): 61-89.

Wilber, Charles K. and Kenneth P. Jameson. (1983), *An Inquiry into the Poverty of Economics*. Notre Dame: University of Notre Dame Press.

Wolfson, Martin H. (2002), "Minsky's Theory of Financial Crises in a Global Context." *Journal of Economic Issues* 54(2): 510-516.

Zalewski, David A. (2002), "Retirement Insecurity in the Age of Money Manager Capitalism." *Journal of Economic Issues* 36(2): 349-356.

Zalewski, David A. (2019), "Uncertainty and the Economy of Exclusion: Insights from Post-Keynesian Institutionalism." *American Journal of Economics and Sociology* 78(4): 955-972.

# DÍVIDA PÚBLICA E FALTA DE SINERGIA ENTRE O TESOURO E O BANCO CENTRAL NO BRASIL NO PERÍODO 2004/16

*Federal Debt and the lack of cooperation between the Brazilian Treasury and Central Bank between 2004 and 2016*

**Luiz Alberto Marques Vieira Filho***

**Pedro Rossi**†

## Resumo

Este artigo analisa a relação entre as políticas fiscal e monetária ou ainda, sob a ótica institucional, a relação entre o Tesouro Nacional e o Banco Central no Brasil. A hipótese defendida é a de que a relação recente entre o Banco Central do Brasil e o Tesouro Nacional foi marcada pela falta de sinergia no período 2004/2015. Para isso, mostra-se que a tentativa de melhorar o perfil de dívida pública pelo Tesouro com a redução da oferta de LFTs foi contraposta pelo aumento das operações compromissadas do Banco Central. Argumenta-se que a concorrência das compromissadas aos títulos públicos do Tesouro Nacional implica uma dificuldade na estratégia de prefixação e alongamento da dívida pública.

**Palavras-chave**: Teoria Monetária Moderna; Dívida pública; Bancos centrais; Política econômica; Operações Compromissadas.
**Código JEL:** H6; E5; E6

## Abstract

This article seeks to analyze the relation between fiscal and monetary policy, or, in institutional terms, the relation between the National Treasury and the Central Bank. The underlying hypothesis is that the current relationship between the Brazilian Central Bank and the National Treasury lacks synergy, making more difficult for the government to obtain the desired public debt profile during the years from 2004 to 2016. It will be shown that the Treasury´s intent for better debt profile was opposite by repurchase agreements issued by Central Bank of Brazil. It will be argued that the competition of those repos to government bonds implies a difficulty in the strategy of pre-fixing and lengthening the public debt.

**Keywords**: Modern Monetary Theory; Public debt; Central banks; Economic policy; Repurchase Agreements.
**JEL Code**: H6; E5; E6.

* Doutorando em Economia da Universidade Estadual de Campinas. Contato: betinhovieirabr@gmail.com.
† Professor Livre-docente do Instituto de Economia da Unicamp. Contato: prossi@unicamp.br.

## 1. Introdução

Dentre a literatura internacional sobre a relação Banco Central e Tesouro Nacional, a Teoria Monetária Moderna (MMT) tem se destacado no estudo dessas instituições a partir da articulação entre as políticas monetária e fiscal. A MMT mostra que em países emissores de moeda soberana, como o Brasil, não existe restrição financeira ao gasto público, no sentido de ausência de dinheiro. Há, no entanto, especificidades no Brasil na relação Tesouro-Banco Central que merecem atenção acadêmica e diálogo com a MMT.

A experiência brasileira nos anos 80 e 90 ensina que a dívida pública pode ser rolada em condições macroeconômicas dificílimas, mas que a estrutura desses passivos pode ampliar as vulnerabilidades da economia e reduzir os espaços das políticas fiscal e monetária. Ou seja, para além da ausência de restrições fiscais em moeda nacional, há questões relativas à qualidade da dívida que merecem atenção.

Nesse contexto, o objetivo deste artigo é, a partir do diálogo da MMT e oferecendo uma contribuição sobre a análise dos passivos estatais, mostrar que a relação recente entre o Banco Central do Brasil e o Tesouro Nacional foi marcada pela falta de sinergia no período 2004/2016, o que dificultou a obtenção de um perfil da dívida pública desejável e gerou fragilidades para a ocorrência de crises monetárias e fugas de capitais. Nesse sentido, trata-se de uma discussão da qualidade dos passivos do Estado a partir das interações das políticas monetária e fiscal e das operações do Banco Central e do Tesouro Nacional e como a estrutura dos passivos pode ser relevante para o reequilíbrio externo da economia. Opta-se por esse período, porque após 2016 houve uma alteração no regime fiscal e eventos extraordinários, como a pandemia de COVID-19, o que requer uma análise detalhada que vai além dos objetivos desse artigo e será realizada a *posteriori*.

Para isso, o artigo se divide em 3 seções para além dessa introdução e das considerações finais. Na primeira seção, apresentamos as linhas gerais da Teoria Monetária Moderna e como o gasto público implica aumento na liquidez da economia, ampliando as reservas dos bancos depositadas no Banco Central, o que acaba criando um mercado cativo para os títulos da dívida pública. Na seção seguinte, apresentamos as críticas que a MMT recebeu sobre o seu funcionamento em países emissores de moeda periférica e apontamos a importância da esterilização da moeda emitida em decorrência do gasto público e como o perfil da dívida aumentou as vulnerabilidades da economia brasileira na crise dos anos 80 e 90. Por fim, na última seção, mostramos como a operacionalização da política monetária pelo

Banco Central dificultou a melhora no perfil da dívida pública e permite ao mercado determinar a oferta de títulos de curtíssimo prazo e sem risco.

## 2. A Modern Monetary Theory e o Gasto Público como Emissão Monetária

A Teoria Monetária Moderna (MMT) surgiu dentro da Escola Pós-keynesiana e explicita a lógica de financiamento do Estado, mostrando que Estados que emitem uma moeda soberana não estão sujeitos a restrições ao financiamento das despesas públicas. A MMT promove uma análise detalhada da institucionalidade das políticas fiscais e monetárias, explicitando as relações entre Banco Central e Tesouro, que serão fundamentais para os fins do presente artigo. Assim, a MMT vai além dos trabalhos pioneiros de Abba Lerner sobre as Finanças Funcionais, mostrando a validade deste arcabouço analítico na economia contemporânea em economias com moedas soberanas (Bell S. , 2000; Bell & Wray, 2002; Fullwiler, 2006; Mosler & Forstater, 1999; Rezende, 2009; Wray L. , 2002; Wray L. , 2003a; Wray L. , 2003b; e Wray L. , 2015.

Os limites para o endividamento e para o déficit público seriam dados pelo próprio pleno emprego ou pelo aumento da inflação, quando a economia se aproximasse de sua plena capacidade. Dessa forma, é a obtenção dos objetivos da política econômica que define os limites para a política fiscal (Dos Santos, 2005). A compra e a venda de títulos públicos buscam calibrar a taxa de juros para o nível de juros adequado a fim de que os investimentos sejam alcançados. A MMT mostra o caráter eminentemente estatal da emissão monetária e da consolidação de sua aceitabilidade mediante à aceitação nos guichês do Estado para o pagamento de impostos, contribuições e taxas ou qualquer outra forma de pagamento. Para a MMT, a divisão entre Banco Central e Tesouro é artificial e esconde o verdadeiro caráter das emissões de títulos do Tesouro, que muito mais do que operações de financiamento, é uma operação de política monetária.

A despesa pública é uma emissão de moeda e aumenta a oferta de liquidez ao mercado, ajudando a satisfazer a demanda por ativos líquidos. Ao realizar um pagamento, o governo recebe um bem ou serviço e o agente privado será detentor de papel moeda ou de depósitos em um banco comercial, que terá o valor correspondente em depósitos nas reservas do Banco Central. O gasto público aumenta a oferta de liquidez na mesma quantidade de seu valor, que ficará disponível para procurar por remuneração, o que do ponto de vista sistêmico só pode ser garantido por emissões de títulos pelo Estado. Assim,

o financiamento das despesas públicas é garantido na prática, com a sua própria realização, que pode criar a demanda pelos títulos para sua rolagem, conforme a preferência dos agentes entre a base monetária e os títulos públicos. Por isso, o resultado imediato é uma redução nas taxas de juros no mercado interbancário, uma vez que os bancos passam a ofertar o excesso de liquidez em operações no *overnight*. Dessa forma, para a taxa de juros não ficar abaixo da meta definida pelo Banco Central, o próprio Tesouro poderá recompor seu colchão de liquidez com a emissão de títulos ou o Banco Central será obrigado a vender títulos do Tesouro que estão em seu portfólio ou realizar operações compromissadas, que são operações temporárias de redução da liquidez.

Sendo assim**,** o gasto público é uma forma de ofertar a liquidez demandada pelos agentes privados para mitigar os efeitos da incerteza. Os dispêndios do banco central com a compra de títulos, moedas estrangeiras ou quaisquer outros ativos de propriedade do mercado e o pagamento de perdas com derivativos resultam em aumentos das reservas bancárias depositadas no próprio Banco Central de propriedade dos bancos comerciais, podendo eventualmente ser convertidas em papel moeda (Wray L. , 2003). Em sentido oposto, a arrecadação de tributos, a venda de títulos pelo Tesouro ou Banco Central, o recebimento de empréstimos da janela de redesconto e o aumento dos depósitos compulsórios de reservas reduzem a quantidade de moeda em circulação e, portanto, a liquidez disponível na economia.

Autores brasileiros ligados a MMT, Jorge (2020) e Gerioni (2020) apontam que os títulos públicos de longo prazo teriam a característica de sob condições normais terem juros mais elevados, por carregarem maiores riscos, mas que não possuiriam nenhum atributo especial, uma vez que não haveria risco de não financiamento em países emissores de moeda soberana. No entanto, é preciso avaliar a relações entre a liquidez da economia, o perfil dos títulos e sua conexão com fugas de capitais. É neste ponto que pretendemos dar uma pequena contribuição na próxima seção.

## 3. A Dívida Pública e a Fragilidade Financeira nas Economias Periféricas

Nesta seção, apresentaremos as principais críticas a MMT no âmbito das economias periféricas e as possibilidades de a liquidez decorrente da despesa pública ensejar crises monetárias e fugas de capitais. Redefiniremos a questão da dívida pública como um problema

de estrutura dos passivos, que poderão fornecer a liquidez necessária para a ocorrência dessas crises.

A problemática do câmbio em economias periféricas é analisada por uma série de autores que abordam a temática da hierarquia das moedas como Carneiro (2008), Cohen (2004), De Conti (2011), De Conti, Prates e Plihon (2014), Prates (2005), Prates (2017) e Rossi (2016). Nesses trabalhos, é mostrado que as transações comerciais e financeiras estão concentradas em poucas moedas nacionais, o que traz consequências relevantes na liberdade para conduzir políticas econômicas. A posição das moedas no Sistema Monetário Internacional (SMI) depende de sua liquidez e do risco em relação à moeda central do sistema, ou seja, a facilidade com que é convertida nessa moeda central. A moeda central do sistema, que é a referência internacional de reserva de valor, permite ao país emissor que modificações nos juros praticamente não alterem a demanda internacional por seus títulos, o que amplia a capacidade de sustentar déficits externos e a autonomia da política monetária.

As moedas periféricas, por seu turno, não exercem nenhuma das funções de moeda internacionalmente, mesmo que sejam líquidas em âmbito doméstico. Esse menor prêmio de liquidez no mercado internacional exigirá retornos maiores dos títulos de dívida emitidos por esses países, que também dependerão dos ciclos internacionais de liquidez, quando o apetite pelo risco dos agentes se amplia. Dessa forma, os ativos denominados nessas moedas são os primeiros a serem abandonados quando as incertezas no cenário internacional e a preferência pela liquidez crescem. Essas fugas de capitais poderão obrigar os bancos centrais a elevar os juros para conter desvalorizações abruptas da moeda, caso as reservas cambiais não sejam suficientes.

Wray (2015) não foi indiferente ao debate sobre as limitações externas à política fiscal, mesmo com moedas soberanas, concordando que os EUA podem incorrer em deficits externos emitindo dívida em sua própria moeda e que países em desenvolvimento podem não encontrar demanda externa para os seus títulos. De modo geral, Wray (2015) defende que bastaria um regime de câmbio flutuante para assegurar o espaço da política econômica, recorrendo ao famoso trilema, segundo o qual um governo pode escolher apenas duas dessas três opções: política econômica doméstica independente, taxa de câmbio fixa e liberdade de capitais. Além disso, Wray (2015) também considera que superávits sistemáticos no balanço de pagamentos, como ocorrem em diversas economias asiáticas, e controle de capitais podem ampliar a liberdade da política econômica em países em desenvolvimento, bem como o acúmulo de reservas cambiais.

Prates (2017), contudo, destaca que Wray (2015) não considera a real dinâmica do sistema monetário internacional e suas implicações para economias em desenvolvimento, incluindo o debate que ocorre entre os pós-keynesianos (Schulmeister, 1988); (Flassbeck, 2011); e (Rey, 2013). Após o fim do sistema de Bretton Woods, a economia mundial passou a ser caracterizada pelas taxas de câmbio flexíveis e pela liberdade da mobilidade de capitais, pelos seus fluxos de curto prazo (investimentos de portfólio e empréstimos bancários de curto prazo), que são extremamente voláteis. A lógica instável desses investimentos, que segue a percepção de risco dos investidores internacionais, subordina a ação dos bancos centrais às tentativas de estabilização desses fluxos cambiais, o que implica perda de autonomia da política monetária. De Conti e Verghanini (2017) lembram que a magnitude das oscilações cambiais na periferia pode levar alguns agentes econômicos privados à falência e ao aumento da inflação.

Parte das críticas dos autores da hierarquia monetária já foram respondidas ou incorporadas às análises mais recentes de economistas ligados à MMT, tanto no exterior como no Brasil. Ao analisar os problemas externos e a insuficiência do câmbio flutuante sobre o caso húngaro, Mitchell (2012) e Wray (2015) consideraram que sucessivas desvalorizações cambiais podem não reestabelecer o equilíbrio externo e, dependo da composição das exportações, também podem não estimular suficientemente as vendas ao exterior. Gerioni (2020) evidencia que sob a perspectiva da taxa de juros exógena, os bancos centrais mantêm a capacidade de determinar as taxas de juros de curto prazo e influenciar as de longo prazo mesmo em episódios de fugas de capitais. Adicionalmente, Gerioni (2020) também considera trabalhos empíricos mostram que os efeitos de *pass-through* sobre a inflação estão se reduzindo ao longo do tempo e com efeitos temporários, o que não ensejaria motivos para se renunciar às políticas monetárias e fiscais para a gestão do nível de emprego na economia (Frenkel et al., 2005; Silva e Vernengo 2008). Dalto et al (2020) lembram que o equilíbrio no setor externo requer alterações estruturais na economia, aumentando a capacidade de exportar ou reduzindo a necessidade de importar. Esses objetivos exigem investimentos públicos em projetos de infraestrutura que aumentam a produtividade da economia, em ciência e tecnologia, em capacidade produtiva que substituem importações de energia e outros bens essenciais ou em setores exportadores que a economia possua vantagens comparativas dinâmicas.

Porém, cabe ressaltar, que os movimentos de aceleração e desaceleração da inflação brasileira ainda possuem uma importante influência da taxa de câmbio (Serrano, 2010),

enquanto o acúmulo de reservas internacionais e a melhora no perfil da dívida pública nas últimas décadas reduzem a possibilidade de fugas cambiais persistentes, como ocorrido nas décadas de 80 e 90.

De fato, o que ocorre não é a ausência de restrição orçamentária para o governo, mas a criação da demanda potencial por títulos públicos que deverá retirar moeda de circulação. Quando o governo gasta, ocorre um aumento na base monetária de recursos que buscarão investimentos lucrativos e a única saída sistêmica, ou seja, pelo conjunto dos agentes, são os títulos públicos ofertados pelo Banco Central ou pelo Tesouro Nacional. Mas esse retorno ao caixa do Tesouro não é automático e dependerá de algumas circunstâncias e condições, que são ainda mais relevantes em países periféricos, que possuem incertezas substancialmente maiores e, consequentemente, maior prêmio de liquidez para a moeda.

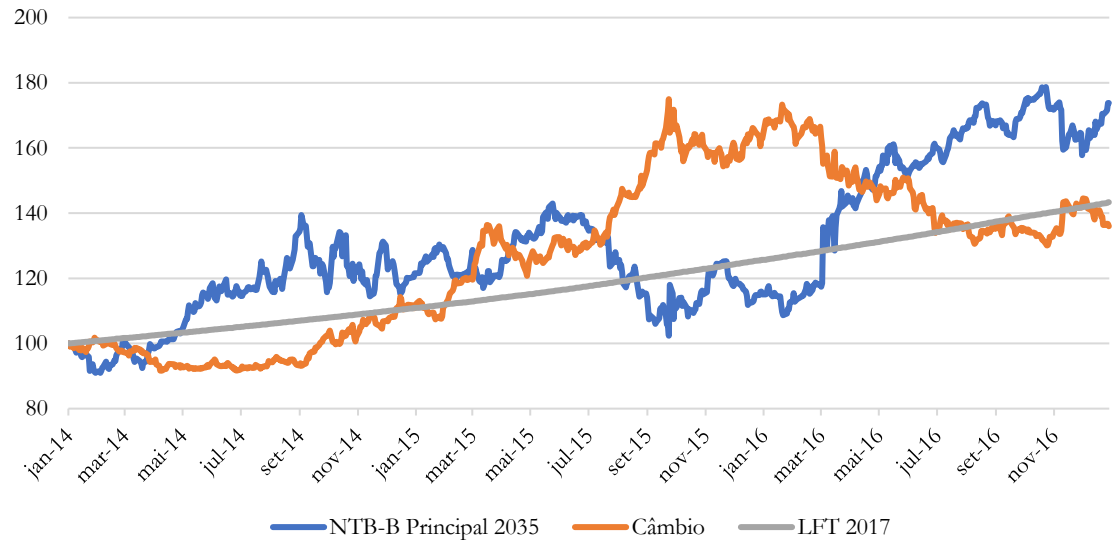
Os ativos líquidos são aqueles que podem ser rapidamente convertidos em moeda com baixos custos de transação e de manutenção. (Davidson, 2011: 88) A principal característica da moeda é ter um rendimento zero, um custo de carregamento muito baixo (eventualmente custo de guarda), mas um prêmio de liquidez substancial. (Keynes J. M., 1936). Os economistas pós-keynesianos, incluindo aqueles adeptos da MMT, destacam o papel da preferência pela liquidez na alocação dos portfólios, considerando a teoria da preferência pela liquidez como uma teoria geral dos preços dos ativos e muito mais que uma teoria pela demanda por moeda (Keynes J. , 1937) (Townshend, 1937). No âmbito desse artigo, é importante considerar as diferenças de liquidez entre os títulos públicos, o trade-off entre os prazos da dívida pública diante da preferência pela liquidez.

Contudo, cabe ressaltar que o mercado de dívida pública nos grandes países periféricos é organizado e movimenta diariamente elevado volume de recursos, o que garante a liquidez dos títulos mesmo de prazos mais longos no mercado secundário. Os agentes podem individualmente se desfazer de seus títulos sem grandes descontos em relação aos preços praticados. Entretanto, os papéis de longo prazo e rendimentos fixos tendem a se desvalorizar mais fortemente diante de movimentos de venda. Ou seja, os preços de títulos de longo prazo e pré-fixados possuem uma sensibilidade maior às variações nas taxas de juros, o que é expresso pelo conceito de "duração".

A título de exemplo, apresentamos o Gráfico 1 com o valor com base 100 em 01 de janeiro de 2014 de uma LFT com vencimento em 07 de março de 2017 e de uma NTB-B Principal, título que paga juros e o IPCA, com vencimento em 15 de março de 2035. Nesse gráfico, é possível observar que, enquanto as LFTs se valorizaram constantemente e sem

sobressaltos durante o período, as NTN-Bs oscilaram fortemente e chegaram a registrar substanciais desvalorizações em alguns períodos. Por exemplo, entre 25 de maio de 2015 e 24 de setembro desse mesmo ano, o valor de venda de uma NTN-B Principal 2035 caiu 28,42%.

**Gráfico 1 - Preço de Venda dos Títulos e Taxa de Câmbio (Jan/14 = 100)**




Fonte: Elaboração própria a partir dos dados do Tesouro Nacional.

A análise de MMTistas brasileiros considera o perfil da dívida pública de menor relevância, uma vez que países emissores de moeda soberana sempre poderão emitir moeda para arcar com o vencimento da dívida. Além disso, consideram que o alongamento da dívida requer juros maiores, com indesejáveis efeitos redistributivos. Contudo, reconhecem que em momentos de maior incerteza, ocorre a pós-fixação e encurtamento pontual do perfil da dívida pública (Jorge, 2020) (Gerioni, 2020).

No caso de países periféricos, o referencial de acumulação pode se dar no exterior, como mostram os economistas da hierarquia monetária, o que torna a possibilidade de enxugar essa liquidez essencial para evitar uma fuga sistemática desses recursos ao exterior, comprometendo a estabilidade da moeda nacional. Não basta que a moeda criada pelo gasto público se converta em títulos públicos, é preciso que o perfil da dívida pública desincentive sua reconversão em moeda e, posteriormente, fuga para moedas estrangeiras. Dessa forma, o papel da emissão de títulos da dívida pública vai muito além de garantir rendimentos aos recursos líquidos disponíveis e se torna chave na defesa da moeda nacional. Nesse sentido, o gráfico 1, mostra como o movimento de preços da NTN-B Principal 2035 é praticamente

o inverso da taxa de câmbio, o que indica que as vendas de títulos públicos ajudaram a alimentar a fuga de capitais do período.

No entanto, é preciso compreender que a estrutura de preços de títulos longos e com duração elevada como a NTN-B auxilia no reequilíbrio externo de 2 formas complementares. A primeira é que a queda dos preços desses títulos, conjuntamente com a desvalorização cambial, reduz o passivo externo líquido da economia. A segunda é que a redução dos preços desses títulos é acompanhada pela elevação dos seus rendimentos, o que os torna mais atrativos a novos investidores e aos seus detentores remanescentes. Esta estrutura ajuda a explicar o movimento de curto prazo de desvalorização e recuperação do valor desses títulos, apontado por Jorge (2020), uma vez que normalização dos mercados aumenta a influência das taxas de juros curtas sobre as de longo prazo.

A importância da desdolarização dos passivos externos brasileiros e da desvalorização de ativos marcados a mercado como ações e títulos de dívida é apontado por Biancarelli (2019) como fatores que reduziram a vulnerabilidade externa no período analisado:

> A chave para a compreensão de tal trajetória está na mudança de local de negociação destes instrumentos, com aumento expressivo das ações e títulos de renda fixa no mercado doméstico. Somando-se estes passivos à parte do IDE relativa à participação no capital, tem-se o total de compromissos denominados em moeda nacional... Com tal "desdolarização" parcial, a desvalorização cambial acelerada, a partir de meados de 2014, contribuiu para melhorar a posição externa do país, ao contrário do que tradicionalmente ocorre. Como parte importante destes compromissos são marcados a valores de mercado, a queda nas cotações de títulos e ações também contribuiu para esta melhora patrimonial. O resultado disso ... é que a movimentação no estoque de passivo externo da economia brasileira, e, portanto, de sua Posição Internacional de Investimento, descola-se completamente dos fluxos registrados no Balanço de Pagamentos (Biancarelli, 2019, pp. 230-231).

Quanto a eventuais dificuldades de rolagem, basta que o Tesouro aumente a liquidez dos títulos públicos oferecidos ao mercado, encurtando prazos e adequando indexadores para que a dívida seja rolada. Dessa forma, o Tesouro pode tanto gerenciar os rendimentos dos títulos como a sua liquidez, num *trade-off* entre custo e perfil de dívida, buscando o *mix* mais adequado à gestão da dívida pública. Além disso, como esses títulos constituem parte relevante da riqueza financeira, os volumes negociados no mercado secundário costumam ser consideráveis mesmo em grandes países em desenvolvimento, o que garante a facilidade para a venda desses títulos, a menos que ocorra uma crise sistêmica que exija grandes descontos para a sua venda. Por isso, o encurtamento de prazos e indexadores menos sensíveis à incerteza reduzem os riscos dos títulos públicos e aumentam a sua liquidez em

momentos de crise, o que garante a sua aceitabilidade pelo mercado, embora possa acarretar aumento nas vulnerabilidades externas da economia. Esse movimento é observado por Jorge (2020), que aponta que exatamente em momentos de crises internacionais, políticas ou rebaixamento de *rating* ocorre um aumento nas emissões pelo Tesouro Nacional de títulos pós-fixados ou de curto prazo, embora os efeitos da perda do grau de investimento em setembro de 2015 tenham sido temporários.

Nesse trabalho, consideramos que quando o governo gasta, há um aumento da base monetária, na quantidade de moeda disponível para a sociedade e, esta moeda como definido por (Keynes J. M., 1936), possui os atributos de rendimento "q" nulo, custo de carregamento "c" desprezível, mas prêmio de liquidez "l" considerável. Em tempos normais, basta que o rendimento "q" de um título da dívida pública e seu prêmio de liquidez "l" seja superior ao prêmio de liquidez da moeda "l" para que exista a demanda para a sua aquisição. Como gestor da dívida pública e emissor da própria moeda, o governo pode tanto reduzir os prazos dos títulos, criar indexadores e incentivar o mercado secundário de dívida pública, o que eleva a liquidez dos títulos públicos, como aumentar o rendimento pago aos seus detentores. Dessa maneira, o governo tem ao seu alcance os mecanismos de incentivo para que os detentores da moeda migrem para os títulos públicos, o que garante a demanda por seu financiamento. O fato é que o prazo médio da dívida pública e seus indexadores podem variar consideravelmente conforme varia o prêmio de liquidez da base monetária, que é constituída pelo papel moeda em poder do público e pelas reservas bancárias, bem como pela propensão dos agentes em transformar essa riqueza líquida em riqueza financeira ilíquida e mais rentável. Por isso, o prêmio de liquidez das reservas bancárias não invalida a capacidade do Estado de refinanciar seus títulos, na prática, indefinidamente. O Estado, que emite tanto a moeda como os títulos da dívida pública, pode ajustar a liquidez de seus títulos às possibilidades de financiamento do mercado.

A possibilidade de criação de indexadores para a remuneração da dívida pública (índices de preços, cestas de produtos, moedas estrangeiras, juros interbancários) permite que os títulos públicos mantenham sua funcionalidade na acumulação de capital. Essa questão é essencial, pois a dívida pública será liquidada e paga em moeda doméstica, ao menos enquanto o processo de sua destruição não estiver avançado até o ponto de que uma moeda estrangeira a tenha substituído em todas as suas funções. No entanto, como apontaremos mais a frente, esse processo poderá fragilizar a estrutura financeira da dívida pública, criando vulnerabilidades à economia como um todo.

A experiência brasileira nas graves crises dos anos 80 e 90 sugere que, enquanto a moeda preservar sua função de meio de pagamento, a dívida pública em moeda nacional poderá ser rolada. Mesmo que a moeda deixe de poder exercer as funções de reserva de valor ou de unidade de conta, a dívida pública poderá ser indexada a uma cesta de produtos, a juros de mercado ou a uma moeda estrangeira, o que garante a funcionalidade da dívida pública no ciclo de valorização do capital. Assim, os prazos curtos e alguns indexadores garantem a liquidez da dívida pública, enquanto os juros e os indexadores garantem a dívida pública como meio de acumulação do capital. Mas o financiamento da dívida pública com um perfil mais líquido não é livre de problemas, uma vez que sua liquidez pode facilitar as apostas especulativas contra a moeda.

Belluzzo e Almeida (2002)[1] apontam que esse movimento de liquidez crescente da dívida pública é uma ameaça a existência da própria moeda, uma vez que estoques gigantescos de riqueza podem se converter rapidamente em moedas estrangeiras ou ativos reais, o que pode gerar um padrão explosivo nos preços e o abandono da moeda até mesmo como meio de pagamentos, devido a sua desvalorização extremamente veloz e atroz. Qualquer choque externo ou interno, mudanças nas expectativas sobre a sobrevivência da moeda e solvência do setor público poderão contar com a liquidez da dívida pública para amplificar corridas contra a moeda. Para Belluzzo e Almeida (2002), a vinculação da dívida pública ao overnight durante as décadas de 80 e 90 exacerbou os problemas do balanço de pagamentos, bem como, em larga medida, foi uma consequência desses problemas externos, em relação à liberdade de implementação da política econômica. Os problemas externos se tornavam ainda mais dramáticos com a possibilidade de a dívida pública rapidamente promover uma corrida cambial de grandes dimensões, o que levaria a uma hiperinflação aberta e ao enterro definitivo da moeda doméstica.

Belluzzo e Almeida (2002) mostram que as fugas de capitais podem comprometer o papel da moeda nacional como padrão de avaliação da riqueza, enquanto num momento de crise o mercado de capitais internacionais praticamente se fecha para os países da periferia, conforme descrito nos ciclos internacionais de liquidez. As fugas de capitais obrigam que a

[1] Ferraz (2017) aponta que a redução da demanda por moeda nos anos 80 não resultou em perda da capacidade do Banco Central em determinar a taxa de juros, posto que a demanda por moeda migrou para os títulos públicos emitidos pelo Estado e ressalta que a origem da crise brasileira foi a crise da dívida mexicana de 1982 e o acesso restrito ao mercado internacional de capitais. Além disso, é criticada a concepção de Belluzzo e Almeida (2002) de crise fiscal, o que não faria sentido em economias emissoras de moeda soberana. A despeito das críticas, o ponto a ser analisado pelo presente artigo é a relação entre a estrutura dos passivos da dívida pública e as crises externas.

política monetária se volte à manutenção das funções da moeda, evitando a ruptura do padrão monetário e a dolarização completa da economia. Neste contexto, a dívida pública, cada vez mais líquida, cumpre seu papel na desestabilização potencial da moeda, pois pode se converter rapidamente em poder de compra e ampliar a fuga para moeda externa ou para ativos reais. Em momentos de grande incerteza, o financiamento da dívida pública é garantido pelo aumento de sua liquidez, corriqueiramente da redução dos prazos de vencimentos, ainda mais em momentos em que a crise monetária ameaça a própria a sobrevivência da moeda doméstica e, portanto, da razão de existir de uma dívida denominada nessa moeda. Além disso, as dúvidas quanto à sobrevivência de uma moeda colocam sérios limites tanto a políticas monetárias, quanto à gestão da dívida pública.

> Quanto à dívida pública, cabe apenas ressaltar como os rentistas reagiram ao risco da desvalorização. Foram dois os métodos principais: o encurtamento dos prazos aceitos para adquirir títulos de governo (um deslocamento da "preferência pela liquidez") e a efetivação de operações de arbitragem nos mercados de ativos, sobretudo no mercado paralelo de dólar, mas também nos de ativos reais. (Belluzzo & Almeida, 2002, p. 135)

O caso brasileiro fornece importantes *insights* sobre os limites e os riscos que envolvem a gestão da política fiscal. A criação da moeda indexada, embora tenha preservado a moeda nacional, colocou a gestão macroeconômica em limites estreitos, uma vez que a riqueza financeira concentrada em prazos extremamente curtos se constitui numa constante ameaça de crise monetária derradeira.

> Exerciam, assim, os possuidores de riqueza mobiliária, um enorme poder de dissuasão sobre a política monetária e de juros, mediante a ameaça de rápidas mudanças de posições, com efeitos explosivos sobre os preços dos ativos. Essa capacidade de gerar grave instabilidade passaria a ser a marca registrada da década, e não estava refletida apenas na evolução ou nas dimensões, em termos absolutos e relativos, do endividamento público nos anos mais difíceis da crise. (Belluzzo & Almeida, 2002, p. 135)

A despeito das críticas, das quais subscrevemos algumas delas, a MMT permite compreender que o gasto público é sempre uma emissão monetária, um acréscimo nas reservas dos bancos comerciais no Banco Central. Esse fator torna evidente a criação de um mercado potencial para o financiamento de qualquer volume de deficit público, no qual o gestor da dívida pública pode adequar as características dos títulos ofertados para atender ao mercado. Contudo, a criação de liquidez pela política fiscal não é livre de consequências, pois pode ampliar as vulnerabilidades externas, facilitar fugas de capitais e crises financeiras e monetárias, caso não seja devidamente enxugada por títulos de dívida pública com perfil adequado.

Deste modo, podemos recolocar a questão da política fiscal e da gestão da dívida pública como um problema de estrutura dos passivos públicos, que passam a ter uma tarefa de restringir ou encarecer a obtenção de liquidez para apostas especulativas contra a moeda, enquanto o montante total da dívida e do déficit público deixam de ocupar o lugar das preocupações centrais sobre o tema.

Dentro deste arcabouço, na próxima seção mostraremos que a utilização das operações compromissadas para o enxugamento estrutural de liquidez pelo Banco Central do Brasil permite ao mercado determinar a oferta de títulos de prazos reduzidíssimos e de altíssima liquidez, o que dificulta a obtenção de um perfil de dívida pública desejável, com características que dificulte a ocorrência de fugas de capitais e crises monetárias.

## 4. As operações compromissadas do Banco Central e a estrutura da dívida pública

Nesta seção, será mostrado como a implementação da política monetária brasileira, com predomínio das operações compromissadas do Banco Central, com menor importância das vendas definitivas de títulos do Tesouro Nacional e outros mecanismos, acaba dificultando a melhora do perfil da dívida pública.

O fato é que a autoridade monetária se defronta com um mercado interbancário líquido, com um estoque enorme de operações com o Banco Central e expressivo volume de operações diárias entre os bancos[2]. Para o enxugamento dessa enorme liquidez, o Banco Central utiliza preponderantemente as operações de mercado aberto, que podem ser divididas entre as operações compromissadas e as operações definitivas.

As operações compromissadas podem ser definidas como operações com acordo de reversão, em que a transferência de títulos é temporária, com prazo e preço de retorno definidos. Para reduzir a liquidez do mercado e elevar a taxa de juros, o Departamento de Mercado Aberto (DEMAB) do Banco Central realiza o compromisso de recompra dos títulos em data futura fixada por um juro estabelecido previamente (a última compromissada de rentabilidade pós-fixada foi registrada nas Notas Econômico-Financeiras para a Imprensa de Mercado Aberto em abril de 2005).

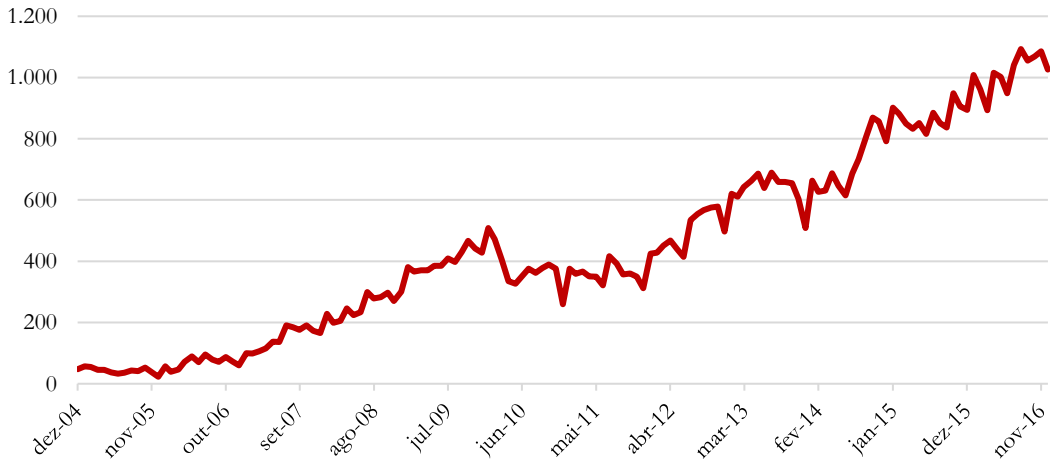
[2] Segundo dados da Notas para Imprensa do Mercado Aberto do Banco Central, apenas entre os bancos, o volume médio diário das operações compromissada de 1 dia no sistema Selic era de R$ 1,06 trilhão em Dezembro/16, com 6.397 operações.

Nas operações de mercado aberto definitivas, o Banco Central vende os títulos públicos do Tesouro Nacional de sua carteira ao mercado, que passa a deter sua posse definitiva e credita os valores na conta de reserva do banco comercial no Banco Central. Dessa forma, as vendas de títulos públicos federais pelo Banco Central reduzem os depósitos de reservas bancárias e a liquidez do sistema financeiro. Em sentido oposto, as compras de títulos públicos pelo Banco Central aumentam os depósitos nas contas de reservas bancárias, uma vez que é necessário o pagamento pelos títulos públicos adquiridos.

O enxugamento de liquidez estrutural com operações definitivas de títulos públicos é apontado como prática corrente pelos principais bancos centrais do mundo para o enxugamento de aumento de liquidez estrutural (Federal Reserve, 2005; Gray & Talbot, 2006; Bindseil, 2014.

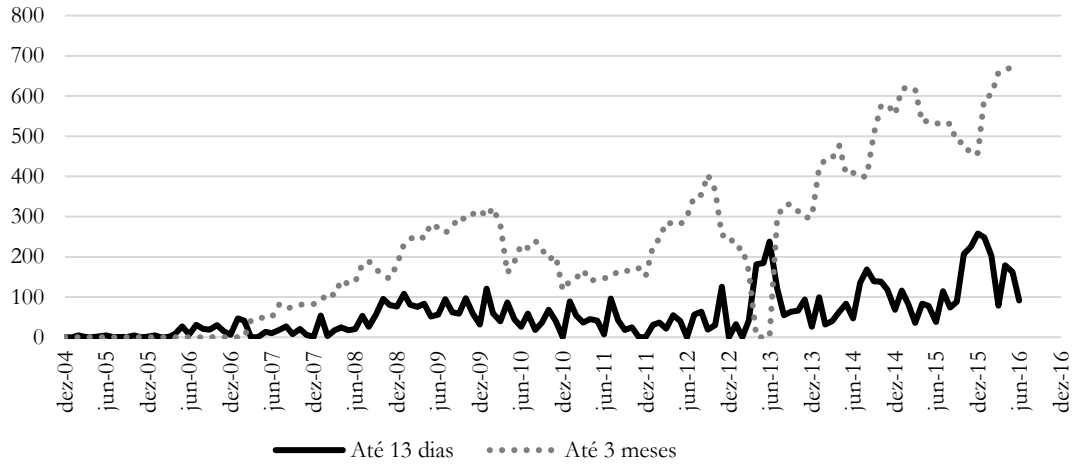
No entanto, o Banco Central do Brasil tem nas operações compromissadas o cerne operacional da política monetária. Em dezembro de 2016, o saldo das operações compromissadas do Banco Central chegou a R$ 1,26 trilhão (ver Gráfico 2), dos quais R$ 985 bilhões possuem prazo máximo de 3 meses (ver Gráfico 3), mostrando o caráter de curto prazo dessas operações no Brasil, exacerbando ainda mais a liquidez estrutural do mercado brasileiro.

**Gráfico 2 - Saldo de Operações de Compromissadas (em R$ bilhões)**




Fonte: Elaboração própria a partir dos dados do Banco Central do Brasil

**Gráfico 3 - Compromissadas de Curto Prazo (R$ Bilhões)**

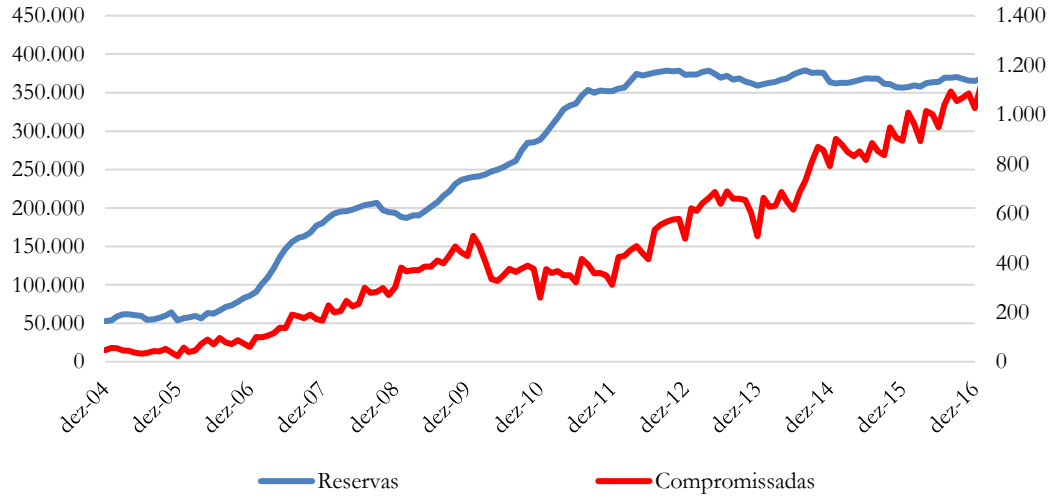



Fonte: Elaboração própria a partir dos dados do Banco Central do Brasil

O grande elemento estrutural de aumento de liquidez no sistema que exigiu a emissão das compromissadas foi o aumento das reservas internacionais (Gráfico 4). Quando o BC adquire alguma moeda estrangeira, há um aumento na base monetária que, caso não seja enxugado, levará a uma redução na Selic. Segundo o BCB (2018), de 2000 a 2017, o estoque de compromissadas cresceu o equivalente 16,2% do PIB, dos quais as operações com reservas internacionais responderam por 14,9% do produto. O acúmulo de compromissadas pode ser dividido em duas fases: a primeira, que vai de 2004 até a crise financeira internacional em 2008, se deve às operações de esterilização das operações de compra de reservas internacionais, que ampliam a base monetária, e a segunda começa em 2014, quando a política de superávits primários se encerra na prática, gastos públicos passam a ampliar a base monetária e há aumento nos juros das próprias compromissadas (BCB, 2018).

É importante observar que, ao enxugar a aquisição de reservas internacionais com operações compromissadas, o Banco Central gera um descasamento do prazo entre seus ativos e passivos, uma vez que o prazo médio das compromissadas é de 21 dias e o das reservas internacionais era de 1,93 ano em dezembro de 2016, descasamento que é amenizado pela alta liquidez dos títulos que compõem as reservas no mercado internacional. Nesse aspecto, dado o descasamento e o caráter estratégico de longo prazo das reservas, seria de esperar que o Banco Central acumulasse passivos de melhor qualidade/maior prazo. Além do descasamento de prazos, há também um descasamento de moedas, as reservas denominadas em dólar e as compromissadas em reais.

**Gráfico 4 - Reservas Internacionais (US$ milhões – eixo da esquerda) e Operações Compromissiadas (R$ milhões – eixo da direita)**



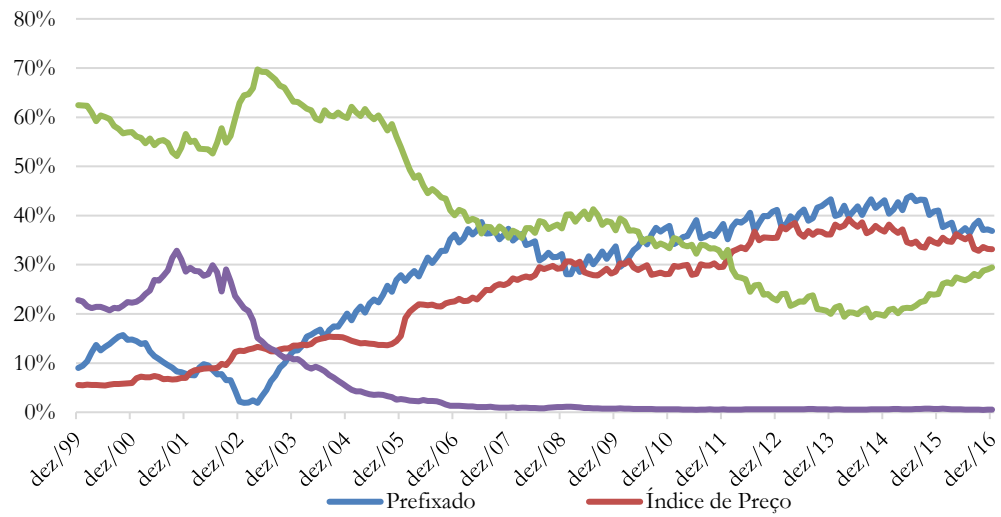

Fonte: Elaboração própria a partir dos dados do Banco Central do Brasil

A maior parte das compromissadas (R$ 716 bilhões em dez/16) é rolada no dia seguinte a cada reunião do Comitê de Política Monetária (COPOM) com prazo até a próxima reunião, com taxa ligeiramente abaixo da Meta Selic, operação conhecida no mercado pelo jargão de COPOM-COPOM. Como a taxa de juros já está definida entre as reuniões do COPOM, não existe porque falar em risco de preço dessas operações. O Banco Central ainda emite compromissadas mais longas (com prazos de 5 a 7 meses), que são ofertadas às sextas-feiras, com comunicado divulgado às quintas-feiras com os prazos das operações ofertadas e quais papeis serão aceitos como colateral para as compromissadas. No entanto, o saldo dessas compromissadas em dezembro de 2016 era de R$ 108,6 bilhões, ficando bem abaixo do saldo das compromissadas mais curtas.

Além do curto prazo das operações compromissadas, um problema estrutural do financiamento da dívida pública brasileira são os títulos de indexação financeira, com preços insensíveis à variação das taxas de juros, o que permite vendas maciças destes títulos sem perdas de valor em direção à movimentos especulativos. O financiamento da dívida pública, no Brasil e em outros mercados de menor desenvolvimento, possui a tendência para o curto prazo de vencimento dos títulos de dívida pública e para a elevada aversão ao risco, consubstanciado nos títulos de indexação a taxa de juros de curto prazo e na atrofia do mercado de crédito privado, que permanece encurralado em suas modalidades mais simplórias, com prazos curtos e baixo risco.

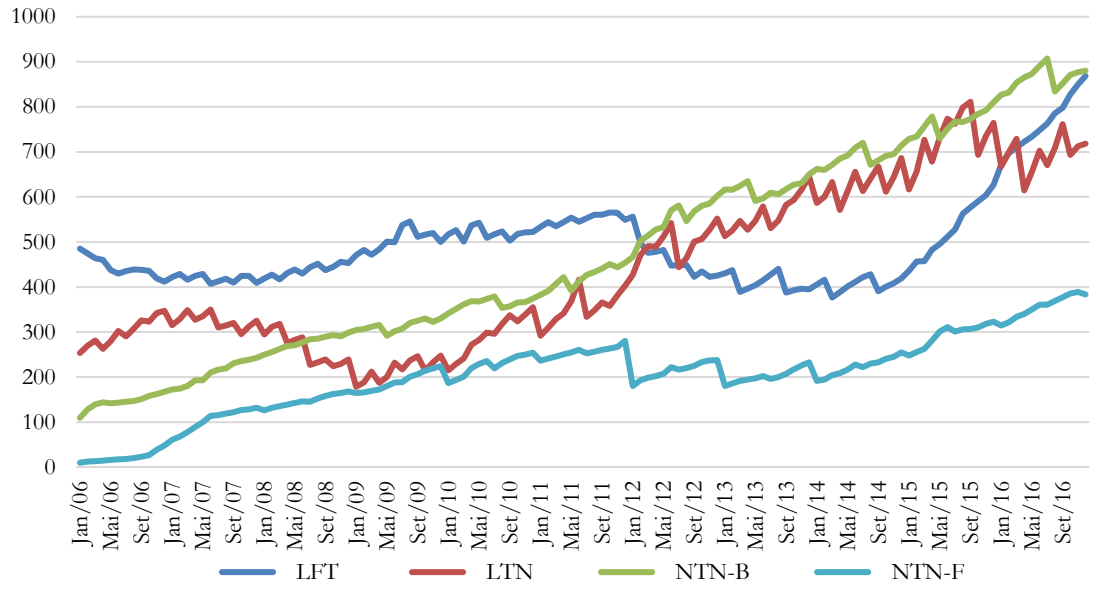
O Tesouro Nacional tem como alguns dos seus objetivos na gestão da dívida pública a pré-fixação, o aumento da maturidade média da dívida e a redução da proporção de títulos no curto prazo. No Gráfico 5 e no Gráfico 6, é possível verificar um relativo sucesso na estratégia de substituição de títulos com taxas flutuantes, com a queda na participação de títulos como as LFTs no estoque da dívida, cuja participação no total da Dívida Pública Mobiliária Federal Interna (DPMFi) caiu de 51,6% em janeiro de 2006 para 29,43% em dezembro de 2016. Nesse período, houve um aumento na participação dos títulos pré-fixados (LTNs em especial) de 26,70% para 36,88%. Os títulos indexados à inflação, como as NTN-Bs (IPCA), passaram de 19,15% para 33,18%.

**Gráfico 5 - DPMFi em Poder do Público (%)**




Fonte: Elaboração Própria a partir dos dados do STN

**Gráfico 6 - DPMFi em Poder do Público (R$ bilhões)**



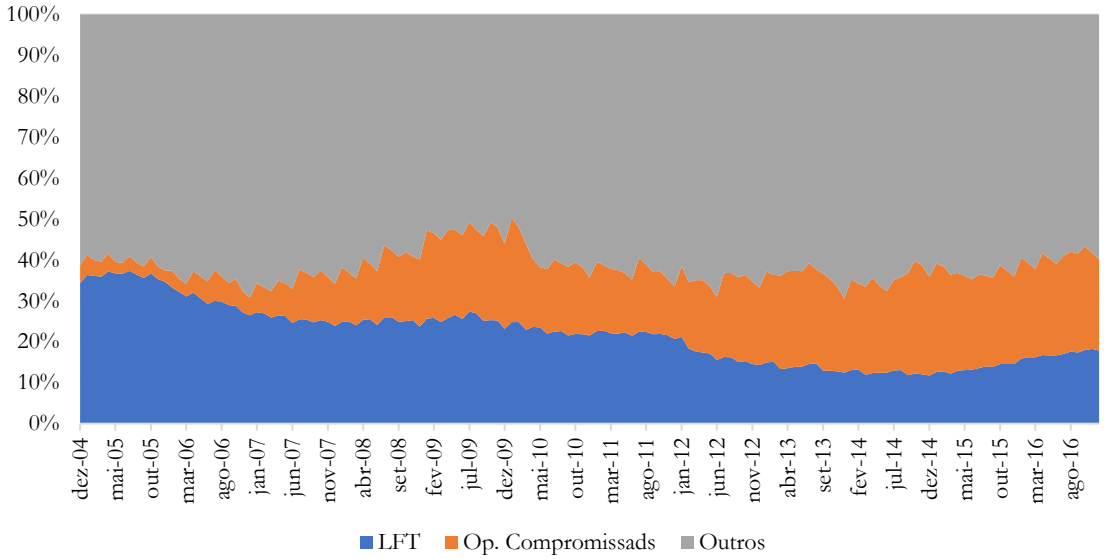

Fonte: Elaboração Própria a partir dos dados do STN

Ademais, essas emissões do Tesouro Nacional foram exitosas em manter o alongamento do prazo médio da dívida pública mobiliária federal interna. Em dezembro de 2014 e no mesmo mês de 2016, o prazo médio da DPMFi aumentou de 4,28 anos para 4,44 anos, patamares próximos aos registrados pela dívida pública americana na primeira década deste século, que mostra a criação de um mercado para títulos públicos de longo prazo.

Em contraposição à melhora do perfil da dívida pública durante o biênio recessivo de 2015/2016, a proporção de títulos vinculados à Selic subiu de 19,62% para 29,43%. Esse é um problema importante, uma vez que a elevada proporção de títulos de indexação financeira reduz a eficácia da política monetária, aumenta a imprevisibilidade na gestão da dívida pública e dificulta a criação de um referencial para o mercado de crédito privado de longo prazo, ao mesmo tempo que permite a aposta contra a moeda praticamente sem custos nos movimentos para se desfazer dos títulos. Além disso, as compromissadas constituem um fator que praticamente impediu qualquer evolução na composição da dívida pública no tocante à pré-fixação. A participação somada de compromissadas e LFTs na DBGG passou de 38,73% em dez/04 chegando a 39,04% em dez/16 (Gráfico 7)[3], o que mostra a persistência do vício pela liquidez na alocação dos portfólios dos investidores brasileiros.

[3] No Gráfico 7, foi utilizada a metodologia de cálculo da DBGG pré-2007 por ser mais extensa e permitir a análise de um período maior.

**Gráfico 7 - Participação na DBGG (%)**




Fonte: Elaboração própria a partir dos dados do Banco Central do Brasil.

Nesse artigo, aponta-se que as operações compromissadas possuem características muito semelhantes às LFTs. Por isso, o mercado tem a sua disposição ativos alternativos para a tentativa do Tesouro Nacional de reduzir a quantidade de LFTs em sua carteira. De fato, há uma concorrência entre as LFTs e as operações compromissadas, que reduz o raio de manobra do Tesouro Nacional em colocar ativos com características distintas daqueles demandados pelo mercado.

Keynes (1936) aponta como características essenciais dos ativos a liquidez (l), o custo de carregamento (c) e o rendimento (q). O fato é que a compromissadas possuem altíssima liquidez assim como as LFTs, uma vez que a maioria delas é rolada num prazo curtíssimo de 1 dia ou num prazo de 45 dias, nas operações "COPOM-COPOM". Além disso, o custo carregamento das compromissadas é baixíssimo para as instituições financeiras que operam no mercado de reservas bancárias e possuem praticamente o mesmo rendimento das LFTs, uma vez que dificilmente ultrapassam os décimos de porcentagem nos juros anuais de diferença em relação á taxa Selic. Nesse sentido, a nova legislação que permite que o Banco Central aceite depósitos remunerados dos bancos comerciais não deverá alterar o cenário, uma vez que as suas propriedades essenciais (l, c, q) são as mesmas das compromissadas

Os títulos públicos costumam ser substitutos próximos à moeda, fornecendo liquidez aos agentes e garantindo, no caso brasileiro, uma boa rentabilidade. Assim, a emissão de compromissadas com características semelhantes a um dos mais líquidos ativos da economia,

as LFTs, acaba concorrendo com os títulos do Tesouro Nacional na alocação dos portfólios dos agentes. Mesmo que o Tesouro Nacional não role a totalidade de LFTs do mercado para melhorar o perfil da dívida, os agentes podem forçar a queda da taxa de juros no mercado interbancário até que o Banco Central aja da forma esperada e oferte as compromissadas desejadas. Desse modo, embora a gestão do Tesouro Nacional consiga melhorar o perfil da dívida de sua carteira, o mesmo poderá não ocorrer com o perfil da dívida do setor público como um todo. Com isso, embora o Banco Central não tenha a capacidade de restringir a capacidade de financiamento do Tesouro Nacional, a Autoridade Monetária acaba influenciando na carteira de títulos que poderá ser ofertada, o que dificulta as metas do Tesouro de pré-fixação e alongamento da dívida.

Dessa forma, a preferência pelas operações definitivas para atender os movimentos estruturais de liquidez devolveria à gestão da dívida pública o papel estratégico na definição da curva de juros de longo prazo e sobre a estrutura de seus passivos. A definição da estrutura de taxas de juros passa a depender somente das ofertas do Tesouro, que atuará sobre todo o estoque de dívida incluindo os títulos vendidos pelo Banco Central, mas de responsabilidade do Tesouro. O atendimento da demanda do mercado deixa de contar com um ofertante de última instância para ativos líquidos e sem risco como as operações compromissadas, das quais a quantidade ofertada pode ser determinada pelas preferências dos agentes privados.

## 5. Considerações Finais

Esse artigo procurou mostrar que a relação entre o Banco Central do Brasil e o Tesouro Nacional no período entre 2004 e 2016 foi marcada pela falta de sinergia, o que dificulta a obtenção de um perfil da dívida pública desejável, que reduza as possibilidades de ocorrência de fugas cambiais ou crises cambiais e monetárias.

A MMT mostra que não há restrição financeira ao gasto público, que seria limitado apenas no lado real da economia, especialmente pelos níveis de emprego. Além disso, essa interpretação teórica ressalta o caráter do gasto público como emissão monetária, o que evidencia os dilemas keynesianos da moeda e sua relação com o financiamento da dívida pública. Enquanto a moeda soberana existir, o gasto público produzirá a demanda pelos títulos que poderão ser emitidos com diversas estruturas. A questão essencial não é "se" o gasto público será financiado, mas "como" será a estrutura da dívida pública resultante ex post, sob quais condições os agentes renunciarão à moeda em troca de títulos públicos pré-fixados e de longo prazo e, portanto, de maior risco. Nesse sentido, a qualidade da dívida

pública importa e a sua função é muito maior do que sugerida pela MMT de mera determinação das taxas de juros e ajuste do volume de investimentos.

A drenagem da liquidez dessas reservas bancárias originadas nos gastos públicos com títulos públicos pré-fixados e de prazos longos é ainda mais importante em economias periféricas, sujeitas a uma posição subordinada na hierarquia internacional das moedas e com o processo de acumulação de capital muitas vezes ligado à lógica internacional. A experiência brasileira com a crise crônica dos anos 80 e 90 mostra que uma dívida pública líquida, que muitas vezes pode ser caracterizada como uma quase-moeda, facilita a ocorrência de fugas de capitais, crises cambiais e monetárias e reduz o espaço para as políticas fiscais e monetárias nessas crises, o que tende a exacerbar ainda mais os seus efeitos recessivos.

A opção do Banco Central de operacionalizar a política monetária fundamentalmente por meio das operações compromissadas permite ao mercado controlar a oferta dos ativos os quais deseja. Caso o Tesouro Nacional opte por não rolar integralmente as LFTs para melhorar o perfil da dívida, os investidores não serão obrigados a realocar seu portfólio ao longo da curva de juros ou aceitar uma maior exposição a riscos privados no overnight[4]. Para evitar uma queda da taxa básica de juros abaixo de sua meta, o Banco Central ofertará as compromissadas desejadas pelo mercado, ajudando a perpetuar as características perversas do perfil da dívida pública brasileira, em que pese as melhoras das últimas décadas.

Nesse sentido, pode-se apontar uma falta de sinergia na relação Banco Central – Tesouro no período recente que comprometeu a melhora no perfil da dívida pública uma vez que os movimentos de alongamento de prazo do tesouro foram compensados pela emissão de operações compromissadas de curto prazo pelo Banco Central.

**Referências**


BCB. (2018), *Sistema Gerador de Séries Temporais* . Fonte: https://www3.bcb.gov.br/sgspub/localizarseries/localizarSeries.do?method=prepararTelaLocalizarSeries

Bell, S. (2000), Do Taxes and Bonds Finance Government Spending? *Journal of Economic Issues:* 603-620. doi:https://doi.org/10.1080/00213624.2000.11506296

Bell, S., & Wray, L. (2002), Fiscal Effects on Reserves and the Independence of the Fed. *Journal of Post Keynesian Economics :* 263-271. doi: 10.1080/01603477.2002.11051356


[4] O aumento da exposição a riscos privados no *overnight* é uma possibilidade individual e não pode ocorrer para o sistema bancário como um todo. O incremento de recursos disponíveis no *overnight* implica redução na taxa de juros, o que exige que o Banco Central atinja sua meta.

Belluzzo, L., & Almeida, J. (2002), *Depois da Queda*. Rio de Janeiro: Civilização Brasileira.

Biancarelli, A. (2019), A velha senhora, em roupas novas: vulnerabilidade externa no Brasil atual. Em M. V. CHILIATTO LEITE, *Alternativas para o desenvolvimento brasileiro Novos horizontes para a mudança estrutural com igualdad*. Santiago: CEPAL.

Bindseil, U. (2014), *Monetary Policy Operations and the Financial System*. Oxford: Oxford University Press.

Carneiro, R. (Outubro-Dezembro de 2008), Globalização e Incoversibilidade Monetária. *Economia e Sociedade, 28*: 539-556.

Cohen, B. (2004), *The future of money*. Princeton: Princeton University Press.

Da Costa, F. N. (Março de 2015), Financiamento Interno de Longo Prazo. *Texto para Discussão IPEA, 2053*.

Dalto, F. A., Gerioni, E. M., Omizzolo, J. A., Deccache, D., & Conceição, D. (2020), *Teoria Monetária Moderna: a chave para uma economia a serviço das pessoas*. Fortaleza: Nova Civilização.

Davidson, P. (2011), *John Maynard Keynes*. São Paulo: Actual Editora.

De Conti, B. M. (2011), *Políticas Cambial e Monetária: os dilemas enfrentados por países*. Campinas: Tese (Doutorado) IE/Unicamp.

De Conti, B. M., Prates, D. M., & Plihon, D. (Ago de 2014), A hierarquia monetária e suas implicações para as taxas de câmbio e de juros e a política econômica dos países periféricos. *Economia e Sociedade*: 341-372.

De Conti, B., & Vergnhanini, R. (2017), Modern Monetary Theory: a criticism from the periphery. *Brazilian Keynesian Review, 3*(2):16-31. doi:https://doi.org/10.33834/bkr.v3i2.115

Dos Santos, G. (2005), *Uma Releitura das Finanças Funcionais*. Rio de Janeiro: Tese de Doutorado.

Federal Reserve. (2005), *Purposes and Functions*. Washington, DC.

Ferraz, F. (2017), *Três ensaios sobre a economia brasileira nos anos 86 - 91: uma reavaliação clássica do período Cruzado – Collor; aspectos teóricos do Plano Collor e uma reavaliação clássica do Plano Collor (Plano Brasil Novo)*. Rio de Janeiro: Tese de Doutorado - IE/UFRJ.

Flassbeck, H. (2011), The exchange rate: economic policy tool or market price? *Discussion Paper nº 151*.

Frankel, J. A., Parsley, D. C., & Wei, S. (2005), Slow Passthrough Around the World: a new import for developing countries? *National Bureau of Economic Research, Working Paper, 11199*.

Fullwiler, S. (3 de 2006), Setting Interest Rates in the Modern Money Era. *Journal of Post Keynesian Economics*, pp. 495–525. doi:10.2753/PKE0160-3477280307

Gerioni, E. (2020), *A macroeconomia do pleno emprego na periferia.* Campinas: Tese de Doutorado - IE/Unicamp.

Gray, S., & Talbot , N. (2006), *Monetary operations* . Londres : Bank of England.

Jorge, C. (2020), *A Critical Analysis of Brazilian Public Debt in the 2000s from an MMT Perspective.* Rio de Janeiro: Tese de Doutorado - IE/UFRJ.

Keynes, J. (1937), Alternative Theories of the Rate of Interest. *Economic, 47*: 241–52.

Keynes, J. M. (1936), *Teoria Geral do Emprego, do Juro e da Moeda* (2012 ed.). São Paulo: Saraiva.

Lavoie, M. (2014), *Post-Keynesian Economics: New Foundations* . Northampton: Edward Elgar Publishing.

Lopreato, F. (Janeiro de 2015), Dívida pública: o limiar de mudanças? *Texto para Discussão - IPEA 2026*.

Mitchell , B. (2012), Fonte: Hungary helps to demonstrate MMT principles: http://bilbo.economicoutlook.net/blog/?p=17645

Mosler, W., & Forstater , M. (1999), General Framework for the Analysis of Currencies and Commodities. Em P. Davidson, & J. Kregel, *Full Employment and Price Stability in a Global Economy*: 166-177. Cheltenham: Edward Elgar.

Nakano, Y. (13 de Março de 2012), Para reduzir juro, Selic precisa acabar. *Valor Econômico*. Acesso em 23 de Setembro de 2016, disponível em http://www.valor.com.br/opiniao/2567382/para-reduzir-juro-selic-precisa-acabar

Prates, D. (Mai/Ago de 2005), As assimetrias do sistema monetário e financeiro internacional. *Revista de Economia Contemporânea, 9*(2): 263-288.

Prates, D. (2012), O Efeito-Contágio da Crise Global Sobre os Países Emergentes. Em F. Ferrari Filho, & L. De Paulo, *A Crise Financeira Internacional: Origens, desdobramentos e perspectivas:* 151-154. Campinas: Unesp.

Prates, D. M. (2017), Monetary sovereignty, currency hierarchy and policy space: a post-Keynesian approach. *IE-Unicamp Working Paper*, 315.

Rey, H. (2013), Dilemma not trillemma: the global financial cycle and monetary policy independence . *Paper presented at the Jackson Hole Symposyum* .

Rezende, F. (2009), The Nature of Government Finance in Brazil. *International Journal of Political Economy*: 81-104. doi:10.2753/IJP0891-1916380104

Rossi, P. (2016), *Taxa de câmbio e política cambial no Brasil: teoria, institucionalidade, papel da arbitragem e da especulação* (1ª ed.). São Paulo: FGV Editora.

Schulmeister, S. (1988), Currency speculation and dollar fluctuations. *Banca Nazionale Del Lavoro Quarterly Review*: 343-366.

Serrano, F. (Março de 2010), Juros, câmbio e o sistema de metas de inflação no Brasil. *Revista de Economia Política, 30*(1). doi:https://doi.org/10.1590/S0101-31572010000100004

Silva, C. E., & Vernengo, M. (2008), The Decline of the Exchange Rate Pass-Through in Brazil: Explaining the "Fear of Floating". *International Journal of Political Economy, 37*(4): 64-79. doi:10.2753/IJP0891-1916370403

Townshend, H. (1937), Liquidity-premium and the Theory of Value. *The Economic, 47*: 157-169.

Vieira Filho, L. (2017), Financiamento do setor público e "crise fiscal" na recessão de 2015 e 2016: uma abordagem. *Anais do X Encontro Internacional da Associação Keynesiana Brasileira*. Brasília: AKB.

Vieira Filho, L. (2019), *Gestão da dívida pública e a política monetária nos EUA e no Brasil*. Campinas, SP: Dissertação (mestrado) - Universidade Estadual de Campinas, Instituto de Economia.

Wray, L. (jul./dez de 2002), Senhoriagem ou soberania. *Economia e Sociedade*: 193-211.

Wray, L. (2003), *Trabalho e Moeda Hoje*. Rio de Janeiro: Editora UFRJ / Contraponto Editora.

Wray, L. (2003a), Functional finance and US government budget surpluses in the new millennium. Em E. Nell, & M. Forstater, *Reinventing Functional Finance: Transformational Growth and Full Employment*: 141–159. Northampton: Edward Elgar.

Wray, L. (2015), *Modern Money Theory: A Primer on Macroeconomics for Sovereign Monetary Systems* (2ª Edição ed.). Nova Iorque: Palgrave.

Wray, L., & Tymoigne, É. (Novembro de 2013), Modern Money Theory 101: A Reply to Critics. *Working Paper No. 778 - Levy Economics Institute*.

# A COMMENT ON THE US STUDENT LOAN SITUATION FROM A POST-KEYNESIAN PERSPECTIVE

**Gustavo Pereira Serra***

## Abstract

This paper aims to contribute to the debate on the US student debt situation. First, it highlights the determination of labor earnings and economic activity as a function of macroeconomic conditions and the relevance of considering this endogeneity to analyzing student debt sustainability. Next, I present a background on student loans and the labor market in the US. Moreover, using a Minskyian framework, I argue that the current student debt situation can have adverse results on economic activity, although not leading to financial instability. Last, I comment on the student debt cancellation debate, proposing alternative policies with more progressive and lasting effects.

**Keywords**: Household Debt; Student Loans; Debt Canceling; Post-Keynesian Economics.
**JEL Code**: E12; E24; H52; I22.

* Assistant Professor at Department of Economics, Sao Paulo State University (UNESP), Sao Paulo, Brazil. E-mail: g.serra@unesp.br. I thank Mark Setterfield, Duncan Foley, Gilberto Lima, Willi Semmler, Paulo Lins, Melissa Monroe, Patrick Ciaschi, Tatiana Nieves, Teresa Hernandez, Andreea Prichea, Tanishia Williams, Jacquelin Kataneksza, José Contreras, and two anonymous referees of this journal for their helpful comments and discussions. Any remaining errors are my own. This study was financed in part by the *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil* (CAPES) - Finance Code 001.

## 1. Introduction

Soon after the 2007-08 financial crisis, the sharp increase in student debt in the US was brought to light with the growing concern about another debt crisis, although on a smaller scale, involving student loans. A few years later, in 2020, a new crisis has intensified the debate on the student debt situation, given its effects on the labor market, household income, and household debt sustainability. The Coronavirus Aid, Relief, and Economic Security Act (CARES) Act, which suspended the payments of federal student loans in March 2020, addressed the problem to some extent. However, expected to finish in August 2022, the suspension represents a temporary relief to a current situation that may require lasting solutions.

This paper aims to contribute to the student loan debate using a Post-Keynesian (PK) perspective. One common assumption in most PK strands is the role of effective demand in determining the output level, which makes income and employment endogenous to macroeconomic conditions. I argue that understanding the demand-side macroeconomic consequences of student debt is fundamental for the debate on student loan sustainability and policymaking, especially in the face of the second economic crisis in less than 15 years affecting employment conditions and income.

Moreover, after presenting Minsky's Financial Instability Hypothesis and Kalecki's principle of increasing risk, I analyze the possibility of a student debt crisis in the US case. Comparing this scenario to some aspects that contributed to the 2007/08 financial crisis, I argue that student loans will not lead to a new debt crisis. However, it may have adverse effects on household consumption and economic activity worth discussing. For this reason, I comment on the universal student debt canceling debate, proposing alternative policies such as interest rate reduction and changes in the repayment period before loan forgiveness, which have progressive and lasting consequences to economic activity and financial stability.

This paper is structured as follows: Section 1 approaches certain aspects of educational credit and student loan sustainability from microeconomic and PK perspectives. Section 2 consists of a brief analysis of the history of student loans, wage differentials, and household

debt levels in the US. Section 3 addresses the possibility of a student debt crisis in the US and Section 4 discusses the pros and cons of student loan forgiveness. Section 5 concludes this paper.

## 2. Microeconomic and macroeconomic aspects of student loans

Most microeconomic literature that assesses student loan sustainability and policymaking relies on individual choice models, following Mincer (1958) and Becker (1964) (Avery & Turner, 2012; Lochner & Monge-Naranjo, 2016), which assume the existence of rational agents that take optimal decisions based on the available information. Moreover, there is an implicit assumption that earnings are equal to labor productivity: more productive workers contribute more to the economy and thus earn proportionally higher labor incomes (Mincer, 1958; Becker, 1964; Friedman, 1955). In this case, the wage structure is exogenous to the relationship between workers and firms, and workers' skills and knowledge determine their wages (Bowles & Gintis, 1975). That assumption implies that workers' human capital level is the only determinant of their labor earnings. Thus, any mismatch between the cost of the human capital investment and its financial return would result from mistaken individual choices or the non-availability of relevant information at the moment of the decision making.

Still, there is empirical evidence on the limitation of the assumptions of the rationality of agents' decisions, even when information is available, and earnings being equal to the marginal productivity of labor. For instance, Avery and Turner state that "students often misunderstand financial aid packages, fail to understand the much greater cost of consumer loans (such as credit card debt) relative to student loans and miscalculate the trade-off between academic study and market work" (2012, p.168). However, the violation of the rationality hypothesis does not mean that high student loan default rates result from a miscalculation in individuals' choices. Instead, it may also result from the impossibility of having an accurate forecast of lifetime earnings, considering that the "fog of uncertainty is everywhere concealing the more distant value of education" (Schultz, 1967, p.304).

I divide the macroeconomic implications of student loans into three categories: supply-side, demand-side, and the effects of debt. First, this investment contributes to the productivity of the labor factor of production, affecting not only individuals' earnings but also

the aggregate supply conditions of this economy. Second, human capital investment is a component of household consumption, and therefore of aggregate demand. As such, it has consequences for economic activity. The third category of student loan consequences is the effect on financial stability, given the increasing concern with the growth pace of student debt in countries such as the US.

Although certain microeconomic aspects of student loans are relevant to understanding individuals' borrowing decisions and the first category of macroeconomic effects, I argue that individual choice models have limitations explaining the other two categories when not considering the demand-side consequences of household borrowing, such as the impact of repayment plans and human capital investment on aggregate consumption for economic activity and growth. For this reason, this paper will discuss certain macroeconomic aspects of student loans, focusing on their implications for economic activity (as a component of aggregate demand) and financial stability. After Section 2 contextualizing the US student loan scenario, Sections 3 and 4 resume the discussion of different economic strands and show the implications of demand-led approaches for policymaking concerning student debt crisis and student loan canceling.

## 3. Student Loans in the United States: a brief background

The US government established the federal student financial aid programs with the 1958 National Defense Education Act and expanded them with the 1965 Higher Education Act to provide low-cost student loans to college students with financial needs. The 1965 Act created three types of federal aid: i) the Educational Opportunity Grant (later renamed the Pell Grant), which offered grants for low-income students; ii) the Federal Work-Study program, which provided part-time jobs for students with financial need; and iii) the Guaranteed Student Loans (the Stafford Loans), which consisted in subsidizing the interest rates of private loans (Zhou & Mendoza, 2017).[1] Later, the 1992 Higher Education Amendments created the Direct

[1] One relevant distinction between the 1958 and 1965 acts was that, while in the former the government provided student loans with an interest rate of 3%, in the latter, the government started subsidizing private loans (initially with an interest rate of 6%), so that the interest rate that the student would pay was equal to the previous one. It is noteworthy that the Higher Education Reauthorization of 1972 created the Student Loan Marketing Association (SLMA, or Sallie Mae), which would buy the student loans from the private lenders, thus taking the risk of those contracts. Sallie Mae was privatized in 1996 (Zhou & Mendoza, 2017).

Loan, the main federal student loan program today (Cappelli & Won, 2016; Looney & Yannelis, 2015).

Currently, there are various repayment plans for federal student loans, which can be split into two categories. The first comprises the time-based repayment loans, in which the future payments are determined beforehand so that the student pays off the total balance in a fixed number of years. Two examples are the Standard Repayment Plan (fixed payments) and the Graduated Repayment Plan (the payment increases over the years). The second category comprises the income-driven loans, in which the debt service is a function of the borrower's discretionary income. These have been available in the US since 1994 and today represent the larger share of the federal student aid programs in terms of the number of borrowers. There are currently four types of income-driven student loans, varying mainly in the percentage of the borrower's discretionary income devoted to the debt service (ranging from 10% to 20%) and repayment period before the remaining balance of the debt is forgiven (20 or 25 years).

The amount that students can borrow per year depends on the repayment plan, their financial needs, and the institution attended, ranging from $5,500 to $12,500 for undergraduate students and up to $20,500 for graduate and professional degree students.[2] The (fixed) interest rates per year are 2.75% for Direct Subsidized Loans, 4.30% for Direct Unsubsidized Loans, and 5.30% for Direct PLUS Loans. The repayment period, which usually begins six months after the student graduates, is between 20 and 25 years. Some repayment plans are eligible for loan forgiveness of any remaining balance after the repayment cycle.

The empirical evidence on the effects of federal student loans is vast. Some of the main findings are that the federal aid programs have contributed to the increase in college enrollment (Lochner & Monge-Naranjo, 2016) and positively affected the students' school performance (Cappelli & Won, 2016). However, some authors point out negative economic consequences of federal aid programs, such as an increase in college tuition and fees, after institutions incorporate the subsidy (Lucca et al., 2019). Another negative aspect of this financial aid is the steep increase in student debt, especially in the US, which has led to discussions of a possible student debt crisis (Looney & Yannelis, 2015). The following two

[2] Information in US dollars as of January 2021.

subsections address wage differentials, which represent the primary monetary stimulus for pursuing a college degree, and the current US student debt situation.

### 3.1. Labor market outcome differentials and student debt in the US

Despite the recent trends in pricing, on average, attending college is still worth the cost (Carneiro et al., 2011; Abel & Deitz, 2015). In June 2021, the unemployment rate was 6.0% in the US, being 3.6% for all college graduates and 6.2% for recent college graduates.[3] In 2020, the median annual wages were also different for distinct levels of schooling: $30,000 for those who had only attended high school, versus $50,000 for those with a bachelor's degree. What determines this wage gap is one of the questions that microeconomics aims to explain. One frequent explanation in this literature concerns the increase in labor productivity resulting from higher education: workers with a postsecondary level of education would be more productive, contribute more to the economy, and thus earn proportionately higher labor incomes (Friedman, 1955; Mincer, 1958; Becker, 1964). In the PK literature, wage determination happens through a barg,aining process between workers and firms. Workers' bargaining power is a function of factors such as the tightness of the labor market (which is determined by effective demand), institutional features that affect employment (in)security (Setterfield, 2006), and the growth rate of their human capital stock (Lima et al., 2021).

The equality between earnings and labor productivity assumes, among other premises, the existence of perfect information in the labor market. However, problems with asymmetrical information and discrimination have implications for wage differentials and student loan sustainability. For instance, Hungerford and Solon (1987) show that academic degrees affect wages and employment not only through this technical channel (i.e., labor productivity) but also because of a screening effect - a diploma works as a credential that the worker is more productive, also described as a 'sheepskin effect'. This signaling effect may explain part of the labor earning differentials for different institutions estimated, for example, by Goodell (2016).

Nonetheless, despite the more favorable labor market for college graduates, there is a high disparity in wage differentials even among people with the same educational level.

Consequently, although a college degree pays off for some students, many graduates face labor market earnings below the cost of college (Cellini & Turner, 2019). This fact is especially evident for the bottom 25 $^{th}$ percentile of college graduates, whose wages are equal to or below the median wage for high school graduates (Abel & Deitz, 2014). Another fact not related to labor productivity that may contribute to that wage dispersion for graduates is the evidence of gender (Gharehgozli & Atal, 2020) and race discrimination (Borowczyk-Martins et al., 2017) in wages and employment in the US, which indicates that earnings depend not only on human capital formation and productivity but also on social aspects.

Considering the expected (though not always verified) more favorable labor market conditions for college graduates, many people who cannot afford this cost seek financial support to attend college. In these cases, although students' and parents' income and savings, scholarships, and grants account for a significant part of how families pay for college (Sallie-Mae, 2017), the higher costs of attending college could represent an obstacle for many people, especially low-income populations, were it not for credit conditions. In this respect, student loans contribute to reducing inequality in access to postsecondary education. However, the effect on income and wealth inequality is two-fold: on the one hand, low-income students can seek financial aid to attend postsecondary educational levels, with the increase in schooling possibly reflected in higher labor earnings. On the other hand, the high debt levels resulting from student loans constrain wealth accumulation and commit a large fraction of the borrowers' and their relatives' income and wealth during the repayment cycle. This effect is particularly relevant for groups that are discriminated against in the labor market. The following subsection presents data on the US student debt scenario.

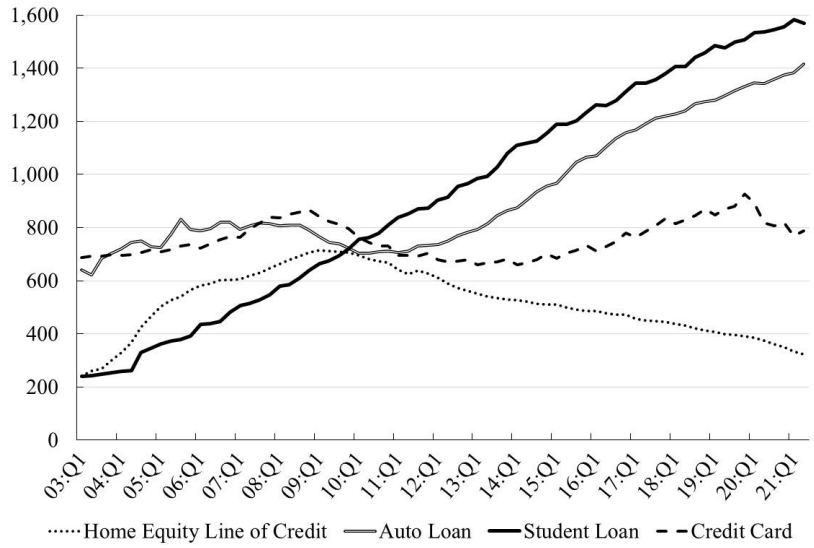
### 3.2. Student debt in the US

The differences in labor market outcomes and affordability of loans have contributed to the recent increase in household debt in the last few decades. In contrast to some other kinds of debt, such as credit card debt and auto loans, which decreased for some years right after the 2007-08 financial crisis, student debt has kept strongly growing (Figure 1), reaching $1.57 trillion in the US in the second quarter of 2021, with an average annual real growth

[3] Data from the Census Bureau and BLS - IPUMS, Federal Reserve Bank of New York.

between the second quarters of 2003 and 2021 of 8.8%.[4] In comparison, the total debt balance added up to $15.0 trillion, presenting an average annual real growth of 2.0% in the same period. In 2010, household debt balances related to student loans were already higher than those associated with credit cards and auto loans.[5]

**Figure 1 - Non-Mortgage Balances (in billions of US dollars)**



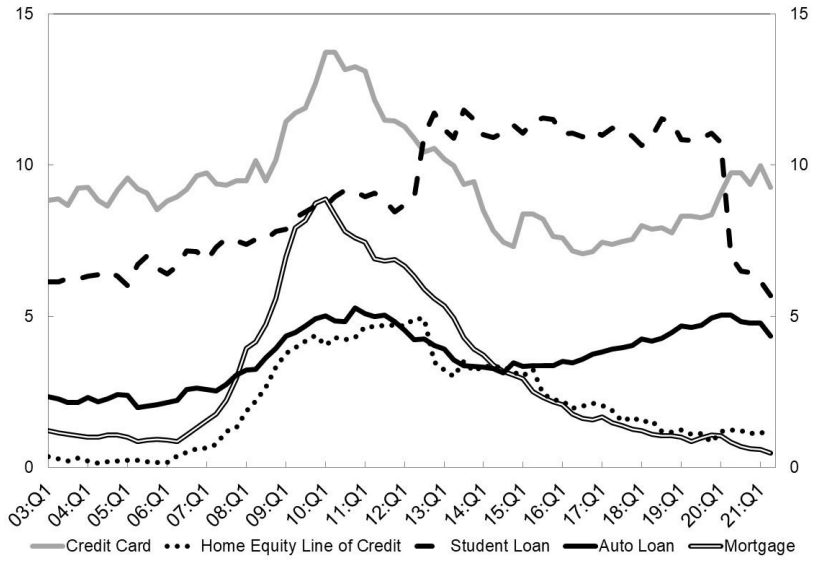

Source: New York Consumer Credit Panel / Equifax.

This growth in total balances is due to, among other factors, an average increase in student debt and the rising number of borrowers. For instance, from 1999-2000 to 2011-2012, the proportion of full-time undergraduates receiving financial support increased from 71.9% to 84.4%. For student loans, this proportion rose from 45.6% to 56.7%.[6] Student debt is most significant for people under 30 years old: in the second quarter of 2021, student loans represented 33% and 16% of the total debt balances owed by people between 18-29 and 30-39 years old, respectively. Some implications of this trend are that younger people in the US tend to i) linger longer in their parents' households (Bleemer et al., 2014); ii) are more risk-averse in searching for jobs (Ji, 2021); and iii) frequently rely on personal savings or family support to manage repayments (Lochner & Monge-Naranjo, 2016).

[4] I calculate the real value of the debt by using the GDP implicit deflator. The average annual nominal growth in the same period was 10.9%.
[5] Data from the New York Consumer Credit Panel / Equifax.
[6] Data from the US Department of Education - National Center for Education Statistics and National Postsecondary Student Aid Study. Organized by the Institute of Education Sciences – IES.

Another concerning issue related to student debt sustainability is the number of borrowers having repayment difficulties (Figure 2). In the last quarter of 2019, 11.1% of the outstanding balance associated with student loans was default or delinquent, versus 8.4% for credit card debt and 4.9% for auto loans. The default rate for student loans decreased in 2020 because of the CARES Act suspension of loan payments. Nevertheless, the calculation of student loan delinquency rates includes those students out of the repayment cycle and, therefore, tends to underestimate actual delinquency rates and the number of people with repayment difficulties. For this reason, Brown et al. (2015) estimate that, even though the delinquency rate on student debt is already the highest among consumer debt products, delinquency rates among borrowers in the repayment cycle are in fact twice as high as the reported ones.

**Figure 2 - Percent of Balance 90+ Days Delinquent by Loan Type**




Source: New York Consumer Credit Panel / Equifax.

The problem with student loan default rates is even more striking when analyzing the groups with repayment difficulties. Addo et al. (2016), for instance, analyze racial disparities in student debt balances. The authors verify that young Black adults owe more student debt than whites. Some explanations for this result concern family background and wealth, which may affect how they pay for college, and the characteristics of the postsecondary institution attended. Furthermore, the students from for-profit institutions are the ones who present higher rates of student-loan default (Goodell, 2016). Although their debts are relatively small,

people owing student loans that attend for-profit and public community colleges are more likely to have an economically disadvantaged background, earn low wages after graduating, and, consequently, default on student loans (Looney & Yannelis, 2015). The following section addresses the US student debt problem, emphasizing the implications of different economic approaches.

## 4. A student debt crisis in the US?

Considering the recent trends of outstanding debt and delinquency rates, one concern about student loans is that they might result in a new debt crisis (Zhou & Mendoza, 2017). Looney and Yannelis (2015), for instance, analyze this possibility based on the current level of student debt and the proportion of debtors facing difficulties in the repayment process. This section discusses the provision of educational credit from a PK perspective and Minsky's Financial Instability Hypothesis (FIH). I argue that this literature does not support the possibility of a student debt crisis in the US. However, although sustainable, the current student outstanding debt may not be desirable, considering its consequences for economic activity.

### 4.1 Educational credit provision in the economic literature

For student loans, the fact that the assets resulting from this investment - which may be denoted as human capital - are incorporated in the investor is one of the causes of under-investment in human capital: unlike investments in physical capital, which may have securities based on the sale of the asset, the only collateral for investment in human beings is future remuneration (Friedman, 1955). One of the remedies for this imperfection in the capital market is the government providing educational credit. In this case, the government contributes to funding the investment, even though the individual still bears the cost. However, there is no consensus about government participation in the credit market.[7] For instance, some authors highlight concerns about the implications of the low-cost federal credit for how much risk households are taking, which could have adverse effects on the financial

[7] During the 1970s and 1980s in the US, the neoliberal argument that the private sector would be more efficient in providing credit was the base for the policy changes that increased the private participation in student loan provision (Zhou & Mendoza, 2017).

system (Ionescu & Simpson, 2016).

The PK literature stresses the importance of credit for investment. Nonetheless, this mechanism also generates the possibility of financial fragility in the economy. When a large part of the aggregate investment is financed by credit, the sustainability of economic growth depends on the relationship between agents' cash flow expectations and their cash flow requirements. Minsky (1992) puts forward the FIH as follows: in periods of economic tranquility, credit risk perception is reduced. Consequently, there is an increase in loans to units whose cash flows are always compatible with the debt service (Hedge situation) and, in a higher proportion, to the economic units whose cash flows are lower than the loan interest (Ponzi situation) or which cannot afford the cash flow requirements at some periods (Speculative situation).

In this context, the lower risk perception increases the proportion of economic units more vulnerable to adverse economic changes. However, in the face of any negative shock that restricts the credit supply, Speculative and Ponzi units would have to reduce their investment due to the cash flow constraint and sell their assets to meet their cash flow requirements. The first consequence has a direct negative impact on aggregate demand. The second affects other firms' investment decisions and cash flow through the capital asset market prices. The decrease in aggregate demand, given the two consequences mentioned above, reduces profits, leading to a cumulative reduction in economic activity level.

Although Minsky has already mentioned the possibility of analyzing the implications of households' liability structure for the financial system (Minsky, 1992), the difficulty in applying the FIH in this case is noteworthy. For the firms, investment decisions are based on the comparison between two relative prices: current output prices, resulting from the short-term demand, and capital asset prices, which depend on long-term expectations. If agents foresee investment opportunities that require more resources than they dispose of, they demand credit to undertake those investments. Moreover, the investment in physical capital increases future production capacity and may contribute to the firms' cash flow expectations compared to their cash flow requirements, which affects their financial risk perception.

On the other hand, household borrowing mostly relies on their consumption behavior.

Except for human capital investment, consumption goods financed by new borrowing do not necessarily positively affect the households' cash flow expectations, whereas debt servicing increases their cash flow requirements. Besides, Pressman and Scott (2018) highlight that, since households always have to spend on necessities, a Ponzi finance household would be the one not able to pay for both a subsistence level of consumption and the interest on the debt with their income. For this reason, they prefer to call the units in this situation 'Lehman finance'. In contrast, although the subprime mortgage crisis also concerned household debt, the applicability of the FIH arises from the impact of securities on the balance sheet and cash flows of private financial institutions.

When using the FIH to address student loans, other concerns emerge. First, for this comparison to be possible, when in the Speculative or Ponzi positions, households should have to roll over their liabilities, not necessarily under the same payment conditions, with potentially harmful implications for the debt sustainability itself. However, adverse financial situations imply only delinquency or default for student loans, not renegotiation at a higher cost. The second issue relates to the intangibility of human capital.[8] Kalecki (1937) states that asset liquidity affects the risk rate of the investment. The main problem with having most of one's wealth in an illiquid asset, according to Kalecki (1937), is that the need for capital would necessarily result in that person taking out a new loan without the possibility of liquidating their assets. For borrowers with a high debt-to-equity ratio, lenders would require higher interest rates, which could jeopardize their financial condition.

Since a student loan does not result in a tangible asset to be used as collateral, in the context of the FIH, a negative shock in the borrowers' income could lead to households having problems with meeting their cash flow requirements and total debt sustainability, without the possibility of liquidating a significant part of their assets. Moreover, given that, at

[8] The term 'human capital' became popular in economics through the works of Schultz (1960), Mincer (1958), and Becker (1964). The concept comprises various kinds of investment, such as schooling, that account for wage differentials. Nonetheless, there are not many studies in the post-Keynesian literature considering this variable. Carvalho et al. (2023), for instance, analyze in a neo-Kaleckian model the role of student loans in knowledge capital accumulation, verifying the effects of this mechanism on aggregate demand and households' financial situation. Also in a demand-driven framework, Lima et al. (2021), for their turn, assume that the government provides universal public education responsible for human capital formation. However, the authors verify that the higher supply of high-skilled workers does not automatically create its own demand, which argues for demand-side enhancing policies.

least in the US, student debt is non-dischargeable when a person declares bankruptcy, difficulties in the repayment process would also have negative implications for the sustainability of other types of loans and total household debt, even though each student loan repayment plan has a constant interest rate.

Many authors have applied Minsky's FIH to explain the unfolding of the 2007-08 financial crisis (Dymski, 2010). Even though mortgages and student loans are different kinds of loans - for example, with respect to asset liquidity, constancy of interest rates, securitization of loans, and the lender (mainly the government for student loans) - many aspects of that crisis are relevant in understanding the potentially dangerous elements of the current student loan scenario, such as the contagious effects, credit expansion, and impacts on aggregate demand. In the following subsection, I address the student loan crisis debate from a PK perspective, especially the FIH.

### 4.2 Addressing student debt crisis from a PK approach

Compared to the 2007-08 subprime crisis, one relevant difference between mortgages and student loans in the US is that, despite the role played over the last decades by the private lenders and Sallie Mae in expanding funding to education, private student loans currently represent only 7.9% of the outstanding balance (Amir et al., 2020).[9] Another difference is the size of student debt and mortgage balances: although the former has sharply increased, totaling $1.57 trillion in the second quarter of 2021, the latter still represents the largest component of household debt, $10.4 trillion in the same period.

For both these reasons, repayment difficulties in student loans would have a contagious effect on the financial system much smaller than the one that led to the events of 2007-08. Despite the high delinquency rates and the many borrowers whose income returns do not pay off their loans, there is no securitization of student debt in the US comparable to what happened to mortgages. Moreover, one of the triggers for the 2007-08 financial crisis was underwater mortgages.[10] When foreclosures increase (and, thus, more lenders are selling the

[9] Data as of the third quarter of 2020. This shift happened in 2010, with the Health Care and Education Reconciliation Act, after which all new federal student loans were conceded directly by the government (Zhou & Mendoza, 2017).

[10] I.e., when the outstanding balance of the loan is higher than the market price of the collateral, leading to

collateral assets), the higher supply in the real estate market would reduce the housing prices and, ultimately, generate new underwater mortgages. The case of human capital illiquidity has different implications.

For student loans, the asset of this investment is incorporated in the borrower. Hence, borrowers cannot sell their human capital to pay off their debt when current earnings do not outweigh the investment cost. Since the expenditure in human capital represents a sunk cost, the only alternative to generate revenues is through using this asset in the production process. Moreover, this incorporation of the asset also explains why there will not be a student loan bubble like the one that happened to house prices. Briefly, in the case of mortgages, the credit expansion had a feedback effect: while it boosted the demand in that sector, leading to higher housing prices, the favorable trend of market prices reduced the risk perception about this operation, thus promoting new credit expansions. Contrarily, the return on human capital investment (given by future earnings) is determined in the labor market, not in the 'human capital market' itself. Therefore, the feedback effect of credit expansion in the real estate and housing markets is not seen here.

Despite the beforementioned difficulty in applying the FIH analysis to this case, certain aspects of the Minskyan analysis contribute to understanding some adverse consequences of this situation for financial stability and economic growth. First, the impact of economic volatility on the sustainability of student loans with a low internal rate of return: for borrowers who commit a large proportion of their disposable income to debt servicing, small adverse shocks in the labor market would lead them to a default position. This result is relevant especially in the aftermath of economic crises.

Second, household indebtedness and student debt influence their credit conditions and decisions about new borrowing (Edmiston et al., 2013), which affects their consumption level and, thus, aggregate demand. Third, a typical result in the PK literature is that the debt service represents an income transfer from households with a higher marginal propensity to consume to another group with a lower one (for example, rentiers), resulting in a reduction of aggregate consumption. In the Minskyan real-financial cycle, this reduction of aggregate demand could

---

foreclosure.

have a negative impact on profits, thus increasing the risk perception of the economy, with unfavorable consequences for the financial situation of economic units and loan sustainability. The following section addresses debt forgiveness and discusses some ways to minimize the adverse economic effects of student debt.

## 5. Student debt canceling

With around 43 million people carrying student loans,[11] and many of them having trouble in the repayment process, there has been much discussion of student loan forgiveness in the US. From the arguments mentioned in the previous section, one may infer that reducing the outstanding student debt balance would contribute to economic activity by increasing household consumption. This policy could benefit the recovery pace of the US economy, especially in the aftermath of the current economic-health crisis. Fullwiler et al. (2018), for example, estimate a positive impact of universal student debt forgiveness in the US to aggregate demand through consumption and investment, with a cumulative effect in ten years on GDP ranging from $861 billion to $1,083 billion (in 2016 dollars). This policy would result in an average job creation per year of 1.2 million to 1.5 million, with insignificant inflationary effects and a small increase in the federal government budget deficit-to-GDP ratio (ranging from 0.29 to 0.37 percentage points per year).

The size of total outstanding student loan balances in the US shows the magnitude of an eventual universal student debt forgiveness or even canceling up to $ 5,000 of the balances of 43 million people. Besides, since the federal government owns most of the outstanding student debt owed by households, any policy that affects the public fiscal budget would have to consider these distributional effects. This is a relevant factor considering the positive correlation between household income and student loan balance (Catherine & Yannelis, 2023).

However, as Serra (2023) explains, student loan canceling would only have a short-term impact. If the government aims for long-term economic results, there are more efficient policies, such as lowering interest rates and reducing the period of eligibility for loan forgiveness. Moreover, the policies proposed here have relatively more progressive

[11] https://studentaid.gov/data-center/student/portfolio.

distributional effects. I show in this section how those policies can be understood from a PK perspective.

The PK literature can explain distributional aspects in the borrowing disposition and, thus, in the student loan forgiveness debate. For instance, Kalecki (1937)'s principle of increasing risk considers not only the return rate of the investment plans, which the microeconomic literature also takes into account, but also the wealth of those agents that undertake it. According to Kalecki, the risk associated with the investment plan reduces the expected gains of that operation. This risk rate is directly proportional to the amount invested relative to the investor's wealth situation, given that "the greater is the investment of an entrepreneur the more is his wealth position endangered in the event of unsuccessful business" (Kalecki 1937, p.442).

When it comes to student loans, this means that for many people, the risk of carrying student debt if this investment is not successful (i.e., if the income return does not exceed the college cost) increases when their wealth is lower. This represents a barrier to taking student loans, especially for low-income populations, and may explain why most of the student loan balances are owed by middle and high-income people. Hence, given that people who currently owe student debt did not take into account the possibility of student loan canceling in their borrowing decisions, universal forgiveness represents an ex-post cost reduction, which mostly benefits those whose financial conditions were more favorable to undertake this investment.

As previously mentioned, the data on household student loan balances corroborates the analysis of the debt-financed human capital investment: households in higher income brackets borrow more to attend postsecondary education (Catherine & Yannelis, 2023), although low-income households (Looney & Yannelis 2015) have more difficulties in the repayment process. For this reason, universal loan forgiveness or the canceling of $50,000 or $10,000 per person would have a regressive effect, benefiting the higher income deciles more than the bottom ones (Catherine & Yannelis, 2023). Moreover, from a PK perspective, the economic implications of that policy are straightforward. Considering the US income and wealth distributions and the lower marginal propensities to consume of higher quintiles of income and wealth (Fisher et al., 2020), such policy would have a lower multiplier effect than

others focusing on low- and middle-income households.

A policy that would have positive long-term economic effects, as Serra (2023) argues, is changing the eligibility criteria for student loan forgiveness in income-driven plans. If the government shortens the student loan repayment cycle without changing the fraction of borrowers' disposable income committed to debt servicing, this policy will increase economic activity. Besides, considering that low- and middle-income people usually carry greater outstanding balances to the loan forgiveness period, earlier loan forgiveness for income-driven plans would have progressive effects (Catherine & Yannelis 2023) and, consequently, a higher multiplier effect. Similar results for household consumption hold if the government lowers student loan interest rates (Serra, 2023).

The positive impact of progressive distributional policies on economic activity results from the differences in marginal propensities to consume of different income groups, as also explored in Section 3. Assuming that the government uses tax revenues to fund this policy, regressive income transfers, considering the distribution of student debt across the population, might have negative implications for economic activity considering the multiplier effect. Besides, even if this policy cost did not affect low-income taxpayers and relied only on taxing upper classes, the opportunity cost of that tax revenue should be taken into account, given that more progressive alternative policies would have a higher multiplier effect.

Catherine and Yannelis (2023) also state that enrolling more borrowers in income-driven plans would help middle-income people. First, in this repayment plan, the debt service represents a constant fraction of earnings, making it easier to afford the debt service if labor market outcomes are oscillating. Following the last section's discussion, it could theoretically reduce default rates in the face of adverse economic shocks. Second, it would increase participation by reducing risk-aversion, given that debt service varies with income (Gary-Bobo & Trannoy, 2015). Relating this argument to Kalecki's principle of increasing risk, income-driven plans mostly benefit people with low income and wealth levels, because it reduces the exposition of their assets to scenarios in which the financial return of this investment does not outweight the cost.

However, some authors highlight potential drawbacks in policies aiming to reduce the

current outstanding student debt balance. One argument against those policies is their moral hazard: canceling the outstanding balances would favor those who miscalculated the costs and benefits of the investment at the expense of those who managed to make the repayments properly (Fullwiler et al., 2018). Ultimately, this could increase the number of new borrowings because people would expect the government to cancel their debt balances again in the future. This incentive could lead to a riskier financial situation for households.

Section 1 reveals some issues with the interpretation that points to the borrowers as the main responsible for the cost-return mismatch. First, it is mostly based on individual choice models, which assume the possibility of making accurate long-term forecasts for labor market outcomes. In contrast, one may point out the impossibility of making such calculations, considering that "at least some essential information about future events cannot be known at the moment of decision because this information does not exist and cannot be inferred from any existing data set" (Dequech, 1999, p.415-6).

For instance, changes in the government's fiscal policy and economic recessions can significantly alter labor market conditions (Rumberger, 1981). This becomes especially relevant as the global economy faces the second crisis in less than 15 years. Second, people who are not having repayment difficulties did not necessarily calculate the cost and benefits of this investment accurately. For instance, many people rely on relatives' savings in the repayment period (Lochner & Monge-Naranjo, 2016; Sallie-Mae, 2017). Therefore, neglecting the macroeconomic impacts on student loan sustainability has negative distributional consequences, considering that low-income populations are the ones who typically cannot count on relatives' savings during difficult times.

## 6. Final Remarks

This paper comprises a background on the US student loan scenario and discusses demand-side aspects of student loans from the PK perspective that affect economic activity and financial stability. I argue that, although student loans may not pay off for many people, many aspects of this type of loans reduce the risk of a student debt crisis in the US. This paper reaches the conclusion of a relatively low risk of a financial crisis caused by student loans after analyzing aspects such as the constancy of interest rates, the intangibility of human capital, and

the fact that the government is the main lender. Nonetheless, although sustainable in the aggregate, student debt has negative consequences for the economy, considering its impact on household consumption.

The PK perspective also sheds light on the student debt-canceling debate. Considering most of the student loan balances owed by middle and high-income people (which I explain using the Kaleckian theory), I argue that policy would have a regressive effect and a lower multiplier effect than alternative policies such as reducing interest rates on student loans, changing the eligibility criteria for student forgiveness, and having more borrowers enrolled in income-driven repayment plans. Nonetheless, although I focus on the economic consequences of student loans, other alternatives unrelated to the financial system are also worth considering for future research.

For instance, in this paper, I do not address the debate on public versus private postsecondary educational systems (Palmer & Pitcock, 2017). However, many countries provide tuition-free college education at public universities. This is not limited to developed economies (for example, France, Germany, and Norway) but also developing countries such as Brazil, Argentina, and Uruguay. Yet, in the US, public universities are not tuition free. This policy results from the idea that higher education is a private good, with personal gains for the investor (Zhou & Mendoza, 2017). Discussing alternatives to the current US postsecondary education system that comprise tuition-free institutions could also contribute to the debate on households' human capital accumulation. Some actions along those lines are considered in the American Families Plan, announced in 2021, such as ensuring two years of free community college and expanding the provision of scholarships (Serra, 2021).

Student loans have contributed to the expansion in access to US postsecondary education. Nonetheless, the increase in student debt outstanding balance and the number of borrowers with repayment difficulties have led to concerns with the sustainability of this funding mechanism. This paper sheds light on the US case, offering a PK perspective to the matter, identifying relevant issues of this policy, and proposing solutions to improve repayment conditions and distributive aspects of borrowing to study.

**References**


Abel, J. R., & Deitz, R. (2014), *College may not pay off for everyone*. Liberty Street Eco- nomics, Federal Reserve Bank of New York. < http://libertystreeteconomics.newyorkfed.org/2014/09/college-may-not-pay-off-for-everyone.html.>

Abel, J. R., & Deitz, R. (2015), Agglomeration and job matching among college graduates. *Regional Science and Urban Economics*, 51: 14–24. DOI: https://doi.org/10.1016/j.regsciurbeco.2014.12.001

Addo, F. R., Houle, J. N., & Simon, D. (2016), Young, black, and (still) in the red: Parental wealth, race, and student loan debt. *Race and Social Problems*, 8(1): 64–76. DOI: https://doi.org/10.1007/s12552-016-9162-0

Amir, E., Teslow, J., & Borders, C. (2020), *Private student loan report*. Technical report, MeasureOne.

Avery, C., & Turner, S. (2012), Student loans: do college students borrow too much–or not enough? *Journal of Economic Perspectives*, 26(1): 165–92. DOI: https://doi.org/10.1257/jep.26.1.165

Becker, G. S. (1964), *Human capital: a theoretical and empirical analysis, with special reference to education*. New York: Columbia University Press.

Bleemer, Z., Brown, M., Lee, D., & Van der Klaauw, W. (2014), Debt, jobs, or housing: What's keeping millennials at home? *FRB of New York Staff Report*, n. 700. DOI: http://dx.doi.org/10.2139/ssrn.2530691

Borowczyk-Martins, D., Bradley, J., & Tarasonis, L. (2017), Racial discrimination in the US labor market: Employment and wage differentials by skill. *Labour Economics*, 49: 45–66. DOI: https://doi.org/10.1016/j.labeco.2017.09.007

Bowles, S., & Gintis, H. (1975), The problem with human capital theory–a Marxian critique. *The American Economic Review*, 65 (2): 74–82.

Brown, M., Haughwout, A., Lee, D., Scally, J., & van der Klaauw, W. (2015), *Payback time? measuring progress on student debt repayment*. Liberty Street Economics, Federal Reserve Bank of New York. https://libertystreeteconomics.newyorkfed.org/2015/02/payback_time_measuring_progress_on_student_debt_repayment/

Cappelli, P., & Won, S. (2016), *How you pay affects how you do: Financial aid type and student performance in college*. Technical report, National Bureau of Economic Research. DOI: https://doi.org/10.3386/w22604

Carneiro, P., J. J. Heckman, & Vytlacil, E. J. (2011), Estimating marginal returns to education. *American Economic Review*, 101(6): 2754–81. DOI: https://doi.org/10.1257/aer.101.6.2754

Carvalho, L. B., Lima, G. T., & Serra, G. P. (2023), Household debt, knowledge capital accumulation, and macrodynamic performance. *Journal of Post Keynesian Economics*, 1-33. DOI: https://doi.org/10.1080/01603477.2023.2170247

Catherine, S., & Yannelis, C. (2023), The distributional effects of student loan forgiveness. *Journal of Financial Economics*, 147(2): 297-316. DOI: https://doi.org/10.1016/j.jfineco.2022.10.003

Cellini, S. R., & Turner, N. (2019), Gainfully employed? assessing the employment and earnings of for-profit college students using administrative data. *Journal of Human Resources*, 54(2): 342–370. DOI: https://doi.org/10.3368/jhr.54.2.1016.8302R1

Dequech, D. (1999), Expectations and confidence under uncertainty. *Journal of Post Keynesian Economics*, 21(3):415–430.

Dymski, G. A. (2010), Why the subprime crisis is different: a Minskyian approach. *Cambridge Journal of Economics*, 34(2): 239–255. DOI: https://doi.org/10.1093/cje/bep054

Edmiston, K. D., Brooks, L., & Shepelwich, S. (2013), Student loans: Overview and issues. *Federal Reserve Bank of Kansas City Working Paper*, n. 12-05. DOI:

http://dx.doi.org/10.2139/ssrn.2137243

Fisher, J. D., Johnson, D. S., Smeeding, T. M., & Thompson, J. P. (2020), Estimating the marginal propensity to consume using the distributions of income, consumption, and wealth. *Journal of Macroeconomics,* 65: 103-218. DOI: https://doi.org/10.1016/j.jmacro.2020.103218

Friedman, M. (1955), The role of government in education. In Solo, R. A. (Ed.), *InEconomics and the Public Interest*, 123–144. New Brunswick, New Jersey: Rutgers University Press.

Fullwiler, S., Kelton, S., Ruetschlin, C., & Steinbaum, M. (2018), The macroeconomic effects of student debt cancellation. *The Levy Economics Institute of Bard College Research Project Reports.*

Gary-Bobo, R. J. & Trannoy, A. (2015), Optimal student loans and graduate tax under moral hazard and adverse selection. *The RAND Journal of Economics*, 46(3): 546–576. DOI: https://doi.org/10.1111/1756-2171.12097

Gharehgozli, O., & Atal, V. (2020), Revisiting the gender wage gap in the United States. *Economic Analysis and Policy*, 66: 207–216. DOI: https://doi.org/10.1016/j.eap.2020.04.008

Goodell, J. W. (2016), Do for-profit universities induce bad student loans? *The Quarterly Review of Economics and Finance*, 61: 173–184. DOI: https://doi.org/10.1016/j.qref.2016.02.003

Hungerford, T., & Solon, G. (1987), Sheepskin effects in the returns to education. *The Review of Economics and Statistics*, 175–177. DOI: https://doi.org/10.2307/1937919

Ionescu, F., & Simpson, N. (2016), Default risk and private student loans: implications for higher education policies. *Journal of Economic Dynamics and Control*, 64: 119–147. DOI: https://doi.org/10.1016/j.jedc.2015.12.003

Ji, Y. (2021), Job search under debt: Aggregate implications of student loans. *Journal of Monetary Economics*, 117: 741-759. DOI:

https://doi.org/10.1016/j.jmoneco.2020.05.002

Kalecki, M. (1937), The principle of increasing risk. *Economica*, 4(16): 440–447. DOI: https://doi.org/10.2307/2626879

Lima, G. T., Carvalho, L., & Serra, G. P. (2021), Human capital accumulation, income distribution and economic growth: a neo-Kaleckian analytical framework. *Review of Keynesian Economics,* 9(3): 319–336. DOI: https://doi.org/10.4337/roke.2021.03.02

Lochner, L., & Monge-Naranjo, A. (2016), Student loans and repayment: theory, evidence, and policy. In: Hanushek, E. A., Machin, S., & Woessmann, L. (eds.) *Handbook of the Economics of Education*, 5:. 397–478. North-Holland: Elsevier.

Looney, A., & Yannelis, C. (2015), A crisis in student loans? How changes in the characteristics of borrowers and in the institutions they attended contributed to rising loan defaults. *Brookings Papers on Economic Activity*, 2015(2): 1–89. DOI: https://doi.org/10.1353/eca.2015.0003

Lucca, D. O., Nadauld, T., & Shen, K. (2019), Credit supply and the rise in college tuition: Evidence from the expansion in federal student aid programs. *The Review of Financial Studies*, 32(2),423–466. DOI: https://doi.org/10.1093/rfs/hhy069

Mincer, J. (1958), Investment in human capital and personal income distribution. *Journal of Political Economy*, 66(4): 281–302. DOI: https://doi.org/10.1086/258055

Minsky, H. P. (1992), The financial instability hypothesis. *The Jerome Levy Economics Institute Working Paper*, n. 74.

Palmer, J. C., & Pitcock, M. R. (2017), Free tuition: prospects for extending free schooling into the postsecondary years. In: Hartlep, N. D., Eckrich, L. L. T., & Hensley, B. O. (eds.) *The Neoliberal Agenda and the Student Debt Crisis in US Higher Education: Indebted Collegians of the Neoliberal American University*. 161–176. New York: Routledge.

Pressman, S., & Scott, R. (2018), Ten years after the crisis: a lost decade. *Real World Economics Review*, 83: 2–19.

Rumberger, R. W. (1981), The rising incidence of overeducation in the US labor market. *Economics of Education Review*, 1(3): 293–314. DOI: https://doi.org/10.1016/0272-7757(81)90001-7

Sallie-Mae (2017), How America pays for college 2017: Sallie Mae's 10th national study of college students and parents. https://www.salliemae.com/assets/Research/HAP/HowAmericaPaysforCollege2017.pdf.

Schultz, T. W. (1960), Capital formation by education. *Journal of Political Economy*, 68(6), 571–583. DOI: https://doi.org/10.1086/258393

Schultz, T. W. (1967), The rate of return in allocating investment resources to education. *The Journal of Human Resources*, 2(3): 293–309. DOI: https://doi.org/10.2307/144836

Serra, G. P. (2023), Household Debt, Student Loan Forgiveness, and Human Capital Investment: a neo-Kaleckian Approach. *Journal of Post Keynesian Economics, 46*(1): 173-206. DOI: https://doi.org/10.1080/01603477.2022.2134035

Serra, G. P. (2021), American Families Plan e investimento em educação: lições para o caso brasileiro. In: Roncaglia, A., & Barbosa, N. (orgs.), *Bidenomics nos Trópicos*, 115-129. Rio de Janeiro: FGV Editora.

Setterfield, M. (2006), Balancing the macroeconomic books on the backs of workers: a simple analytical political economy model of contemporary US capitalism. *International Journal of Political Economy*, 35(3): 46–63. DOI: https://doi.org/10.2753/IJP0891-1916350303

Zhou, E., & Mendoza, P. (2017), Financing higher education in the United States a historical overview of loans in federal financial aid policy. In: Hartlep, N. D., Eckrich, Lucille L. T., & Hensley, B. O. (eds.), *The Neoliberal Agenda and the Student Debt Crisis in US Higher Education: Indebted Collegians of the Neoliberal American University*, 3–18. New York: Routledge.

# *BUEN VIVIR* IN ECUADOR: HAS THE CONSTITUTIONAL PRINCIPLE BEEN REFLECTED IN STRUCTURAL CHANGE FOR DEVELOPMENT?

**Rodolfo V.O. Aguiar***

**Cristina Fróes de Borja Reis†**

## Abstract

This paper aims to investigate the economic dynamics between 2007 and 2017 in Ecuador considering the adoption — as a constitutional principle — of an ecological ideal, which emerged from the indigenous peoples of Latin America: *Buen Vivir*. The historical process that enshrined this concept made the Ecuadorian experience stand out in the recent history of South America. Economic planning was defined as a fundamental dimension to diversifying the productive structure. However, the dependence on oil extraction represented major obstacles to *Buen Vivir*, since its funding was based on fiscal policies enabled by resources from a non-sustainable activity. We analyze this process based on a theoretical background from Latin-American structuralism to *Buen Vivir*, examining the Ecuadorian economic plans and actual dynamics during Rafael Correa's administration, considering the following relevant macroeconomic variables: industrial composition of value-added, exports profile, public investment, foreign direct investment, energetic matrix, and structure of employment. The conclusion is that the evolution of the Ecuadorian economy has not allowed for development strictly according to the parameters of *Buen Vivir*.

**Keywords:** Development; Sustainability; *Buen Vivir*; Structural Change; Ecuador.
**JEL Code:** B50; E65; O14; P16.

* Master's candidate at Center for Engineering, Modelling and Applied Social Sciences (CECS/UFABC). E-mail: rodvaz88@gmail.com

† Professor at Center for Engineering, Modelling and Applied Social Sciences (CECS/UFABC. E-mail: cristina.reis@ufabc.edu.br

## 1. Introduction

The history of the progressive wave in South America at the beginning of the 21st century had in Ecuador an attempt to establish authentic milestones in the relationship between the environment and economic development. The rise of *Alianza País*, led by Rafael Correa, occurred in 2006 in a context of deep social and institutional crisis that led to mobilizations driven by widespread discontent. The protagonism of indigenous and ecological organizations made possible an alliance between progressive forces and native peoples expressed in the effort to hold a Constituent Assembly to refound, recover, and transform the institutional capacity of the State based on the *Buen Vivir* (BV). However, the normative assumption of sustainability and ecological knowledges may not convert into *praxis* and prove insufficient to engender the dynamics of structural change for development. Therefore, the purpose of this article is to understand the constitutional principle of BV and to analyze the contradictions between the definition of economic plans based on this principle and the evolution of the productive and commercial matrix from 2007 until 2017 in Ecuador.

The situation of Ecuador's productive structure and the need to overcome a historically exclusionary model of accumulation based on the oil-exporting primary sector motivated the elaboration of development plans (DP). With an alternative proposal of recognizing the need to establish parameters for planning, monitoring, and evaluating BV, the DP were defined based on six basic dimensions: (i) productive diversification and economic security; (ii) universal access to superior goods (health, education, decent work, and housing); (iii) social equality; (iv) social participation; (v) cultural diversity; (vi) sustainability (SENPLADES, 2013). Given this strategy, one wonders how much they contributed to overcoming the structural heterogeneity and reaching the objectives of BV. We hypothesize that the evolution of the Ecuadorian economy has not enabled development as defined in the BV original formulations.

To investigate this hypothesis, we carry out a brief theoretical review of Latin American structuralism and the literature on BV in section 1, seeking to establish relationships between these approaches. In section 2, we present the constitutional frameworks and main proposals of the economic plans for changing the productive matrix. Finally, in section 3, we analyze the Ecuadorian economy's trajectory, critically analyzing the possibilities of incorporating local knowledge into the economic dynamics of contemporary and peripheral capitalism. Our structural analysis contains the complexity of exports (OEC,

2022), industrial composition of value-added and employment (UNIDO, 2020), and relevant macroeconomic variables (Ecuador, 2020, 2018, 2017; B.C.Ecuador, 2020; Electricidad, 2020). The evidence mobilized seeks to demonstrate whether the development strategies for Ecuador and Latin America moved from the plane of ideas, then to that of legal norms, and, finally, to the real economy.

## 2. From Development to *Buen Vivir*

### 2.1. Development and Underdevelopment in the Periphery

Approaches to economic development vary from very narrow views related to economic growth to broader views related to human capital, sustainable development, and social capital, among others (Garcia Álvarez, 2016). Historically, the huge discrepancies between countries regarding economic development led to the study of the international division of labor. After World War II, the so-called Development Economics sought to understand the specificities faced by underdeveloped nations and their 'backwardness' about industrialized countries, so several schools of thought were generated there.

In Latin America and Caribe, the ECLAC work was characterized by the historical structural method. It examines the productive, social, institutional, and international insertion specificities of peripheral countries from this region — as opposed to the center — and the possibilities for development in the medium and long term (Bielschowsky, 2009). In general, level, growth, and quality of productive investment are at the center of the explanation of development trajectories – retaking Rosenstein-Rodan's (1943) main idea of promoting industrialization through the 'big push' led by the State.

In the dynamics of center-periphery relationships, Prebisch (1949) identified that it fell to Latin America to produce food and raw materials for the large industrial centers. Contrary to the theory of comparative advantages, he verified that relative prices between manufactured and primary goods tend to opposite directions. The outcome was greater gains in income levels from central countries, either in the economic cycle's ascending phase (when the masses get wage increases) or in the descending phase (when they defend their life standard due to price reductions for food). His thesis says, still, that 'the income of entrepreneurs and productive factors from the industrial centers grew more than the increase in productivity, while in the periphery, less than its corresponding increase' (Prebisch, 1949[2000], p.83, our translation). Without increasing productivity in the export sector and the diversification of investments resulting from the accumulation process, Latin American

countries would become more dependent on the primary-export growth model. This would perpetuate and increase the backwardness in contrast to the industrialized nations of the center.

The context that gave rise to this literature had a great influence on Keynes' thought and a reformist character (Cardoso & Reis, 2018). The crucial problem for underdeveloped countries would be to increase investment seeking to expand the productive capacity. So, it would be necessary to plan the investments' volume and structure (Cardoso, 2018).

This kind of qualitative transformation would also be important to overcome the circular causation dynamics of poverty (Myrdal, 1957). This author defines a country as underdeveloped when the stimuli performed by the economic growth main sector result in little substantial and continuous increase in demand, income, investments, and production.

Linking poverty and unequal income distribution to widening disparities in labor productivity and remuneration among people, sectors, and regions, the concept of structural heterogeneity - the persistence of a leading primary export sector with high wages and productivity as opposed to poor subsistence agriculture that feeds a large part of the domestic population (Reis, Barbosa, & Cardoso, 2019). Its persistence was commonly explained by the fact that an abundant supply of labor was accompanied by a slow expansion of its demand because of the slow pace of investment growth and the predominance of high capital intensity (Bielschowsky, 2009). Further, Furtado (1974) affirms that with the pressure for the renewal of consumption patterns from the center, the tendency towards income concentration in underdeveloped countries is maintained, with reflexes on social structures that deepen dependency relationships.

The issue of environmental sustainability appeared with relevance in ECLAC after the reports from the Club of Rome. The orientation turned out to be a development model in which each country in the region assumed strategies to fight poverty and inequality while conserving the environment (Bielschowsky, 2009). After the elaboration of the 2030 Agenda of Sustainable Development Goals, the 'Environmental Big Push' gained space on the ECLAC agenda. Inspired by the Rosenstein-Rodan development theory and the global environmental Keynesianism, the Environmental Big Push represents the coordination of policies to leverage investments for a growth cycle that generates employment and income, reduces structural gaps, and promotes sustainability (Gramkow, 2019).

A 'new' dimension of environmental strategies in this sense is the bioeconomy,

defined as an industrial transition toward the sustainable use of biological resources in intermediate and final products for economic, environmental, social, and national security benefits. It can leverage economic growth in agricultural communities, in line with sustainable objectives (Ortega-Pacheco et al., 2018). Therefore, it is important to know what kind of bioeconomy a country wants to build. Based on a non-Eurocentric perspective and concerning the future of peasant societies, Amin (2017) advocates for an alternative globalization, negotiated and not unilaterally imposed by transnational capital — this form of globalization is one to support communities to have a stronger stake in the international arena, persuading a path towards a new sustainable development paradigm based on the reduction of asymmetries between States, companies and capitals, classes, and intersectional groups.

### 2.2. The BV and its theoretical perspectives

While many Latin American scholars have focused on the material issues of structural change and economic growth, besides contemporary questions such as sustainable development as we have discussed in the previous section, others have dedicated themselves to broadening the conceptual discussion of epistemological aspects related to the region's socio-cultural institutions (Dussel, 2000; Quijano, 2000). BV in Andean countries has been, then, evocated as a robust decolonial theory that can disrupt from the Eurocentric concept of development (de Souza Santos, 2011).

In Ecuador, BV proceeds from the translation and adaptation of the Kichwa indigenous concept *sumak kawsay*, originally understood as 'limpid and harmonious life' (Hidalgo-Capitán & Cubillo-Guevara, 2018). In Bolivia, it comes from the Aymara term *suma qamaña* and is translated as '*Vivir Bien'* Enshrined in the constitutions of Ecuador and Bolivia in the years 2008 and 2009, respectively, it has caused an important impact in the field of Development Economics. For some authors, this allows conforming a Political Economy of BV as an alternative proposal to development, arising from the ancestral thought of the original peoples (Cubillo-Guevara, Hidalgo-Capitán, & García-Álvarez, 2016).

Systematizing the general commonalities around the various understandings of BV, we have (i) redefinition of well-being and life quality; (ii) redefinition of human relations with nature, through a concept of harmony not limited to sustainability; (iii) criticism of linear development models growth-driven; and (iv) recognition of the value of original cultures and knowledge (Villalba-Eguiluz & Etxano, 2017). Regarding differences, there are three perspectives in the literature on BV: the Indigenous/ culturalist, the Ecologist/Post-

developmentalist, and the Socialist/Ecomarxist.

The indigenist/ culturalist interpretation attributes key relevance to the self-determination of indigenous peoples and the preservation of the identity and spiritual elements of the Andean worldview, such as the frequent notion of *Pachamama* between native Andean peoples. The indigenous peoples' aspirations to have control over their own institutions and ways of life, as well as their own economic development, while maintaining their traditions within the states in which they live, are recognized in conventions of the International Labor Organization (ILO) and the United Nations Declaration on the Rights of Indigenous Peoples (Huanacuni, 2010).

The post-developmentalist field has strong sustainability at its theoretical core, proposing to move from anthropocentrism to biocentrism via reconfiguration of social organization and modes of production and distribution (Villalba-Eguiluz & Etxano, 2017). Post-developmentalism advocates overcoming modern and Eurocentric ways of thinking, questioning its discourses, institutionality, and practices proper to what would come to be called the *ideology of progress* (ibid.). It proposes the construction of spaces where the category development ceases to be the central principle of organization of economic and social life, questioning the preeminence of economic growth (Escobar, 2010). Thus, they offer a historical anchorage in the indigenous world and in principles defended by other currents of Western thought (Gudynas & Acosta, 2011).

The components for a transition to BV societies from the post-extractivist point of view are: (i) moving from 'predatory' to 'sensible' extractivism, using enforced social and environmental norms, effective and strict controls, internalizing impacts via technological development; (ii) the next stage would be an 'indispensable extractivism', remaining active the essential enterprises for national and regional needs within a sustainable scope (Gudynas, 2011). These transition conditions require a positioned strategy concerning the current productive matrix based on primary exports and the degree of dependency of the economies from the Global South. Opposing the guidelines from the "open regionalism" — an orientation to improve the international insertion of Latin America in world markets with integration agreements and openness to increase the competitiveness of the countries (CEPAL, 1994) — one strategy for a transition is coordination by 'autonomous regionalism', a form of coordinated actions to be assumed by a group of countries to favorably correct prices and to make social and environmental demands facing world markets. That should include, for example, regulations on the agri-food sectors of South American countries to

break the food insecurity of their populations, in addition to the priority of energy sovereignty in regional integration (Gudynas, 2011). This strategy should be important for BV since it enables countries to deescalate extractive activities in the production and trade structures.

The perspective called socialist or ecomarxist adheres to BV by incorporating the communitarian dimension of economic life and by overcoming the domination of nature conceived by modernity. However, its focus is on criticizing the socio-economic structures of capitalism as the political system that rules the world, and not on the paradigms of the Western world. This anti-capitalist assumption would allow them to go beyond the call for post-extractivism, through radical changes in these structures (Quang & Vercoutére, 2013). Ramírez's (2010) work on '*Sumak Kawsay* socialism' or 'republican biosocialism' is a version of the eco-Marxist vision. BV is understood as a process of satisfying needs, achieving quality of life and dignified death, and prolonging cultures and biodiversity, configuring a pact of post-socialist coexistence.

## 3. BV in Ecuador: from a theoretical concept to a constitutional principle incorporated into development plans

The adjustment reforms of the 1990s intensively applied during the Sixto Durán government (1992-1996) increased the degree of economic openness with little commercial negotiating power. The deregulation of the financial system benefited the private banking sector with the continuation of debt 'sucretization', as a relief to private debtors, and bailout plans for financial institutions (Acosta, 2016). With the deteriorating fiscal position and large devaluation of the sucre, the government of Jamil Mahuad (1998-2000) abruptly enacted the dollarization of the economy, crowning the deterioration of the national financial system during the 1990s. The dollarization of the Ecuadorian economy accentuated trends of balance of payments strangulation, increasing dependence on credit flows from abroad to finance public and private investment, in addition to having liquidity management and the administration of countercyclical policies dependent on the decisions of the Federal Reserve (Meireles, 2014).

The impact of social decline and the state of extreme institutional fragility of the neoliberal period affected traditional channels of democratic representation, such as the organization of labor movement, a reflection of the deterioration of labor relations. Indigenous organizations gained strength through the *Confederación de Nacionalidades Indígenas*

*del Ecuador* (CONAIE) and their own political party *Movimiento de Unidad Plurinacional Pachakutik* (Meireles, 2014, dos Santos, 2018). They were protagonists in mobilizations against governments in the 1990s, but their expectations were renewed times frustrated with the adherence of neoliberal economic policy to the adjustment agenda of the Washington Consensus and IMF.

Rafael Correa was elected president supported by leftist organizations and the Pachacutik; however, he did not support any parliamentary candidates, seeking dialogue in face of the rejection of traditional parties. Alianza País convenes a Constituent Assembly that was made possible due to the participation of traditional forces after a long process of political struggles and negotiations in which social movements had pushed forward for taking part directly in the conformation of the setting of the Assembly (Muñoz Jaramillo et al., 2014). The ecologist and indigenist currents advocated a more horizontal decision-making process and took a critical stance toward the president (Rodríguez Salazar, 2016, dos Santos, 2018). Despite the differences, the design of a constitutional charter that enshrined the Rights of Nature and the BV was achieved, whose construction would be from a dual vision of a development regime and a BV regime, linked in the same hierarchy and integrated through the planning system (Muñoz Jaramillo et al., 2014).

The BV regime comprises the systems of equality and social inclusion plus the recognition and implementation of the rights of nature. Its chapter in the Constitution is dedicated to dimensions such as education, health, social security, culture, science, biodiversity, natural resources, and natural heritage (Muñoz Jaramillo et al., 2014). Development regime is 'the organized, sustainable, and dynamic set of economic, political, socio-cultural and environmental systems that guarantee the realization of *buen vivir,* of *sumak kawsay*. The State will plan the development of the country to guarantee the citizens' rights, the achievement of the development goals and the principles enshrined in the Constitution' (Ecuador, 2008, p.135)

The *Plan Nacional para el Buen Vivir* 2009-2013 (PNBV I) is in the project of the 'Citizen Revolution'. It presents a long-term strategy to build an '*eco-tourist biopolis'*, challenged to connect a new mode of wealth generation and post-petroleum (re)distribution for BV, with the main goal to establish a social, solidarity-based, and sustainable economic system as a benchmark to evaluate changes in the productive structure. (SENPLADES, 2009). Such a strategy aimed to achieve an endogenous and sustainable economy in the medium and long

term, planning alignments in a horizon between 16 to 20 years[1]. Key indicators here are: oil and non-oil industrial production, export concentration, mining production, imports, and others. In general, the project assumes the current situation of dependence on primary goods to sustain the economy and proposes a new dynamic of accumulation to start the transition with income redistribution. The main mechanism would be the selective import substitution, which should be directed to certain sectors: petrochemicals, bioenergy and biofuels, metal-mechanics, biomedicine, pharmaceuticals, biochemicals, semiconductors, and environmental services. However, it was predicted an increase in oil exports and in the proportion of non-oil industrial growth at the same time. Also, the change in the energy matrix, in turn, would involve the promotion of renewable energies and the improvement of energy efficiency.

In the PNBV II (2013-2017) it is possible to observe an inclination toward the trend of 'Socialism of the XXI Century' from the approach of 'Socialism of BV' — or a 'socialist knowledge society' — as an alternative that respects cultural diversity, ecosystems, and intergenerational rights (SENPLADES, 2013). The document highlights the need to advance productive diversification to enable the construction of a new development benchmark. At the same time, the plan would have to continue to address issues such as unemployment, poverty, and huge inequality. Consequently, the productivity improvement appears as an unavoidable necessity for the transition to a high value-added economy, and diversification would also have to advance in the agricultural sector aiming at a relative level of food self-sufficiency (ibid, p.65 and 77). In this blueprint, one can check more goals and indicators established to evaluate a change in the productive matrix. For example, it proposes: to increase the share of exports of high, medium, low and natural resource-based products with high, medium, and low technological intensity to 50.0%.; to increase the share of the manufacturing industry to 14.5%; to reach 20.0% participation of qualified labor force; to reach 60.0% of installed renewable power capacity; and to increase the sharing of non-traditional products in non-oil exports in 7% — although, it is not clear what are these products exactly.

## 4. Ecuadorian economy path under the BV principle

Once our objective is to analyze the dynamics of Ecuador's productive structure during Correa's government, we add on the empirical strategy of Garcia Alvarez (2016) updating its period, emphasizing the following variables: (i) variation and composition of

[1] For more details concerning the outline for this strategy, such as the phases proposed, see (SENPLADES, 2009)

GDP or Gross Value Added (GVA), taking the supply and aggregate demand sides — especially the share of public investment and the trade balance, to identify trends in the production and trade structures; (ii) emphasis on oil and non-oil sectoral behaviors, as well on the energy matrix, to distinguish structural heterogeneity, as expressions of (post-) extractive trends; and (iii) dynamics of employment generation and its challenges. In all these analyses, we seek to identify the changes towards the strengthening of sustainable economic activities, bioservices, renewable energies, etc., establishing bridges between the macroeconomic regime and the insertion of Ecuador into the international division of labor. Table 1 shows all variables that are analyzed in the section.

**Table 1 - Variables included in the empirical analysis**

| Variable | Source (last update) | Motivation |
|---|---|---|
| Gross Domestic Product (GDP), Gross Value Added (GVA) | Banco Central del Ecuador (2017) | To identify trends in production and trade structures |
| Manufacturing Value Added (MVA) | UNIDO (2020) | To identify trends in the industrial profile |
| Economic Complexity Index (ECI) | (OEC, 2022) | To observe potential changes in the country's exports profile |
| Public Investment (PI) | Banco Central del Ecuador (2017, 2018) | To observe public spending role towards BV |
| Foreign Direct Investment (FDI) | Banco Central del Ecuador (2020a) | To understand external influence in driving economic growth |
| Energetic Matrix | BCE (2020), IIGE (2021) | To identify trends of an economy less dependent on oil |
| Employment | INEC (2017, 2022) | To identify the labor situation |

Source: authors

With a strong external constraint for the country, any intention of substantial change should pass through reconfiguration of the state's capacity to intervene in the economy (Meireles, 2014). There was a growth in tax revenues through a reduction in tax evasion and an increase in direct taxes, in addition to the revision of oil exploration contracts and the increase in production from Public Companies in 2010 — replacing private companies that decided to leave the country (Ecuador, 2018). The non-financial public sector's share of GDP went from less than 25% in 2006 to almost double in five years, while payroll more than tripled between 2005 and 2015 (dos Santos, 2018). When analyzing the evolution of GDP components from the perspective of demand**,** it is possible to observe the upward trend of

all of them, especially domestic consumption (Ecuador, 2017), driven by public spending.

Some positive effects of state action were the dynamism of the labor market and the reduction of poverty. However, the capacity of public spending to stimulate the economy was achieved thanks to the increase in government income from greater export revenues, especially from oil. Indeed, a couple of external conditions favored the intensification of extractive activity: (i) the reduced interest rates in central countries and the consequent flow of portfolio investments to Latin American countries; (ii) a tendency to devalue the U.S. dollar that enabled gains from exports; (iii) the increase in oil prices, which became a dynamic component increasing output for enabling investment in conditional cash transfer programs and infrastructure works, i.e. an expanding fiscal policy ; (iv) a new expansion in foreign demand for mining products, expressed in the substantial raise in Foreign Direct Investment (FDI) in mineral exploration in the period 2011-2018 (US$ 3.41 bi), especially coming from Canada and Spain (Meireles, 2014, dos Santos, 2018, Ecuador, 2020a).

This indicates a change in exports destination: according to the Observatory of Economic Complexity, the USA was the main export destination in 2006 with a share of 51% but 30% in 2017; North and Central America's share decreased from around 55% to 40%, respectively; while Asia's share went from around 4% in 2006 to around 20% in 2017 (with China as the main buyer in the region); and South America remained with a share of 20% (with Peru, Chile, and Colombia as main export destinations in the region). As the transition to a decarbonized economy is linked to mining, industrialized countries — such as China and part of Asia — have been demanding ores from Latin America. These conditions are linked to a process of 'reprimarization' of the peripheral economies with the *boom* in primary goods demand and prices - a process called '*Commodity* Consensus' by Svampa (2013).

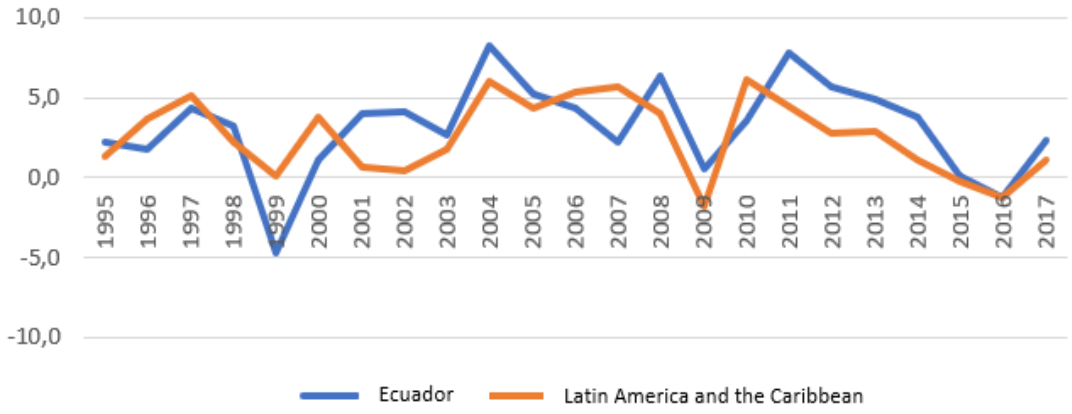
Notwithstanding, the position of Ecuador in the ranking of exports' economic complexity index (ECI, measured by the Observatory of Economic Complexity) worsened from 88th in 2007 (among 120 countries) to 105th in 2017 (among 129 countries)[2]. The export profile remained concentrated in primary products, especially banana (from 13% share in 2007 to 16.5% share in 2017), Crude oil (from 50% to 31%), and frozen shrimps and prawns (from 4% to 15%). There were 8 new products added to the export basket, mostly precious metal ores, then lumber, animal feed, refined crude lead, and agriculture

[2]Visit the OEC website to find both the intuitive and technical explanations of the index.

products such as seaweed and edible vegetables (OEC, 2022).

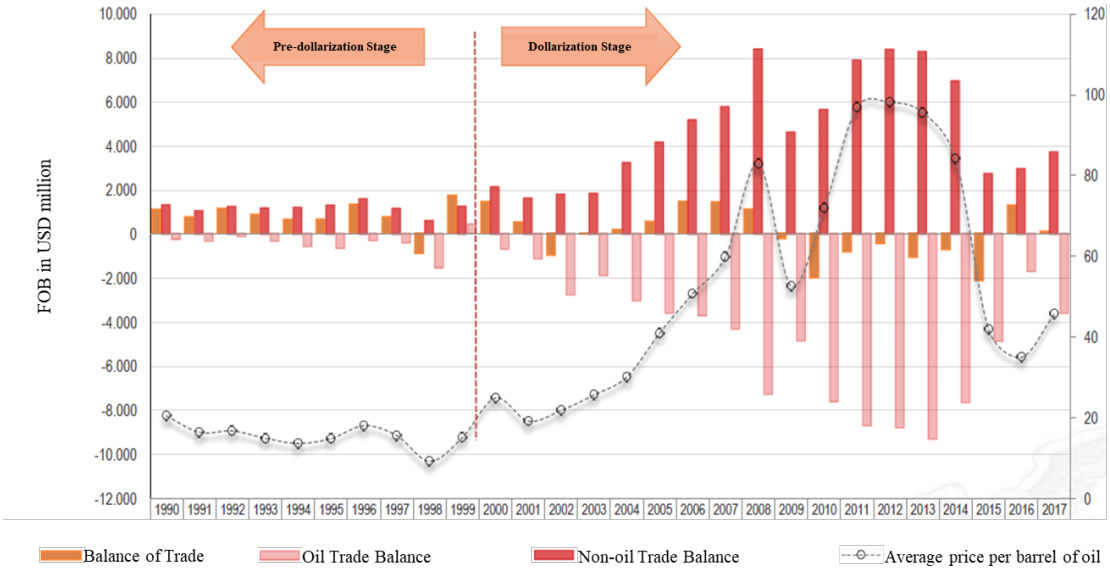
The comparison of Ecuador's GDP growth rate with the average for Latin America and the Caribbean (Graph 1) shows similar dynamics. Growth pulled by *commodity* exports starts in 2003, with a drop in pace during the international financial crisis of 2008-2009, and a marked superiority of the Ecuadorian rate concerning the region on average. This can be explained in part by the 'positive externality' of the dollar devaluation, now the country's official currency (Meireles, 2014). Regarding foreign trade, graph 2 shows that, although the increase in oil prices has boosted the country's production, the deficit in terms of trade balance are verified from 2007 onwards with a large increase in total imports until 2017 (Ecuador, 2018). The influence of oil exports is also evident in the variation of the GDP with a trend of decelerating growth due to the fall in oil prices since 2013.

**Graph 1 - Evolution of the GDP growth rate compared to the regional average: 1995-2017 (constant USD)**




Source: CEPALSTAT (UN, 2021)

**Graph 2 - Total trade balance, oil, non-oil, and the average price of a crude oil barrel: 1990-2017 (million US$ FOB)**




Source: Central Bank of Ecuador (2018)

Public investment was defined as a growth driver that would improve systemic competitiveness, too (Garcia Álvarez 2016). Its path was influenced by the external sector volatilities and the changes of political orientation in the Executive: it went from 4.9% of GDP in 2005 to 11.2% in 2008, reaching the highest level in 2013 with 14.8% and from then to the levels of 8.3%, 6.0%, and 3.7%, in 2017, 2018 and 2019, respectively (ECB, 2020). A substantial part of the public investment went to infrastructure projects. Some aimed at the energetic matrix, such as the construction of nine hydroelectric projects to overcome the dependence on energy from fossil fuels (Garcia Álvarez, 2016). However, the country had imbalances to improve the share of renewable energy in total final energy consumption — 15,90% in 2007, 11,80% in 2013, and 17,10% in 2017 (IEA, 2021).

Regarding the labor situation, Ecuador conducts a national survey on employment, unemployment, and underemployment to produce data on working conditions. For example, unemployment levels in 2007 and 2020 reached over 5,0% and 4,9%, respectively (INEC, 2022). For employment methodology, it considers adequate employment mainly comprises people who earn more than the basic unified wage and work 40 hours or more per week or work less than the statutory hours, while inadequate employment groups all individuals who do not meet the legal minimums in both earnings and hours (INEC, 2017). Considering unemployment as one inadequate type on behalf of insufficiency of work-time or income level (INEC, 2022), this indicator reached a level of 7.7% in 2012, but with the cooling of

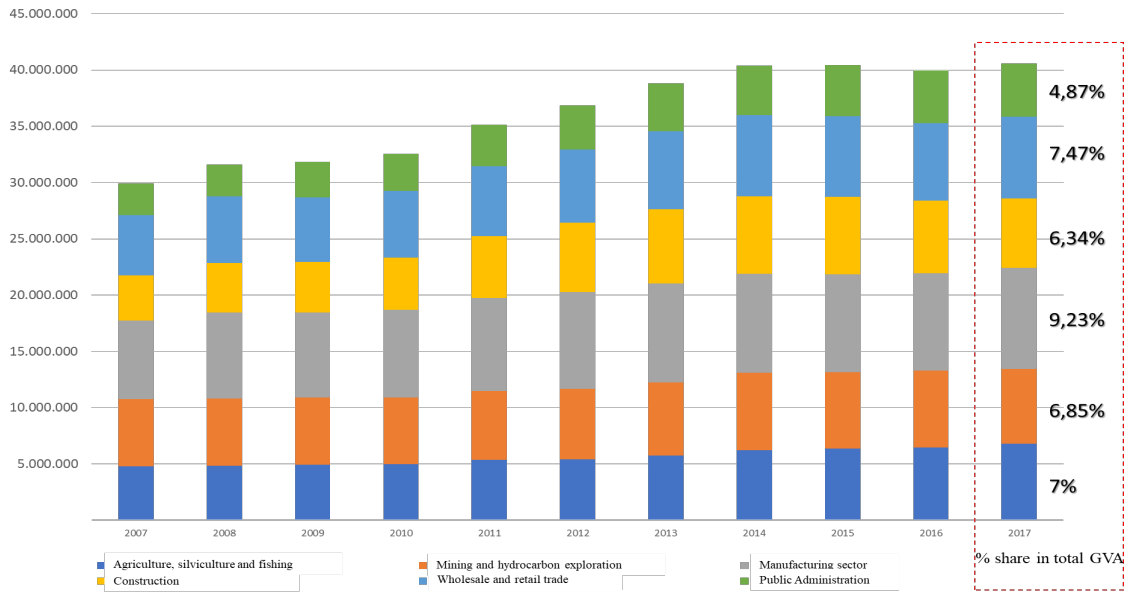
economic activity in recent years, it has grown again and exceeded 18% (ECB, 2018). However, as the methodology to evaluate employment has changed in 2014, some criticism is made about face overvaluation of what is called adequate employment (Carrión Sánchez, 2019). Regarding the manufacturing sector, the wage level is still close to the average of the total level of formal jobs(INEC, 2017).

In 2017, the bioeconomy sector recorded 20% of jobs, equivalent to 1.53 million workers. This is less than the share of 46% of the service sector, but more than the 5% of manufacturing, 8% of construction, and 8% of the power sector. Within the bioeconomy, 76% of jobs were generated in bioagriculture and the rest were in bioindustry, biomanufacturing, and bioenergy (BCE, 2017, Ecuador, 2018 cited by Ortega-Pacheco et al., 2021). Wages in the sector represent only 10% of the country's total, while manufacturing has a significant weight of 22%. On average, a bioeconomy worker earns $207 per month, which is less than the minimum monthly wage. The situation reflects the existence of inadequate working conditions and high informality in the sector, especially in the primary sector (Ortega-Pacheco et al., 2021). Further, the definition of bioeconomy includes goods (bananas, coffee, cocoa, shrimp) whose production and/or extraction does not necessarily if not rarely, correspond to structural change based on new green technologies or services. Also, a review regarding bioeconomy in Latin America has identified 8 different bioeconomy sectors — in which Ecuador has participation only in 3 branches (Rodriguez, Hitschfeld, & Mondraini, 2017). Still, the cited authors have considered that Ecuador recently is exercising some leadership in developing bioeconomy strategies, however many obstacles still need to be overcome structurally.

The indices of gross value added (GVA, graph 3) show an increase of 26% in the manufacturing industry from 2007 to 2014, but then it stagnates. The construction sector had a significant increase of 53% during the period 2007-2017, partly induced by public investment, through infrastructure works. So, the overall results of the macroeconomic regime for economic activity are significant. The GDP production structure is consistent with our analysis of the GDP demand structure. In graph 4, we see that among the manufacturing divisions the structural composition is quite similar to the previously if we look at the average of two periods — 2007-2012 and 2012-2017. Coke and refined oil products had an important decrease due to oil price fall. Among the sectors with major share, non-metallic mineral and chemicals products have increased by 34,66% and 20,68%, respectively. However, industries with greater technological content still have low shares of

total Manufacturing Value Added (MVA) which is problematic if one thinks in terms of diversification.

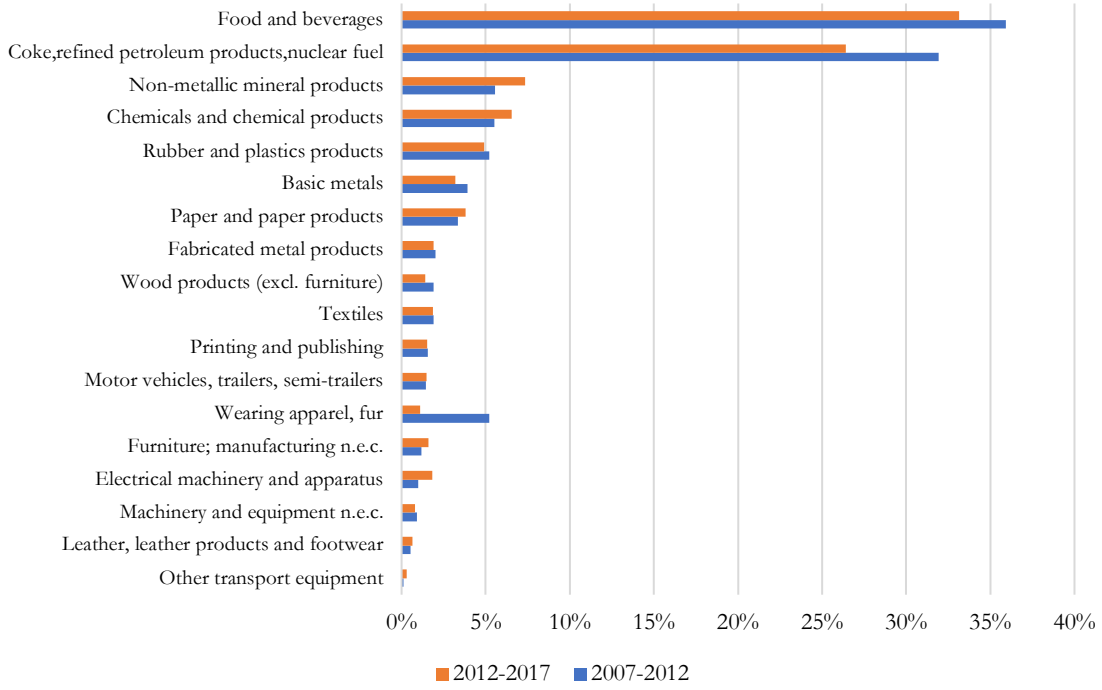
**Graph 3 - Gross Value Added by selected sectors, 2007-2017 (thousands of US$ in 2007)**




Source: ECB (2017), and authors elaboration.

In an analysis of 2017's GVA (Ortega-Pacheco et al., 2021), the sector represents 14% of what was added, it is worth noting that there is equitable participation between what these authors classify as primary (bioagriculture) and secondary (bioindustry and bio-manufacturing of agricultural and animal products) sectors. With a low remuneration of the labor factor in the primary sector of the bioeconomy, this large contribution to the gross value added would be explained by a higher return to the capital factor in this sector (ibid.).

**Graph 4 - Relative share in the average of Manufacturing Value Added (MVA): 2007-2012 and 2012-2017 (USD)**




Source: UNIDO (2020), and authors elaboration.

Moreover, the value-added in construction grew driven by the public investment in infrastructure. Funding for this spending was possible due to improvement in the fiscal position and foreign debt with the government of China and, to a lesser extent, Brazil (Dávalos, 2016). As cited before, this was driven by building hydropower plants. A renewable index indicates renewable energy supply was 9,6% In 2010 and 15,9% in 2017 (IIGE, 2021).

There was a significant advance so that the country does not need to import a significant amount of electricity anymore – but at the expense of territorial and ecological conflicts with local communities (Latorre, Farrell, & Martínez-Alier, 2015, Dávalos, 2016). As the predominance of hydropower in increasing the electricity capacity address mainly the demand from export activities such as mining, global demand appears as a key factor guiding the expansion of this new infrastructure even at the expanse of facing resistance from poor communities with environmental concerns (Latorre, Farrell, & Martínez-Alier, 2015). Lastly, the potential energy capacity in Ecuador is non-bioeconomic, as assumed by Ortega-Pacheco et al (2021). But the cited study suggests that the country can tap abundant biomass sources from banana, rice, corn grain, sugar cane, and wood production. Other possibilities cited for biotechnology energy generation could come from shrimp, coffee, and cocoa processing

residues.

It is evident the general maintenance of Ecuador's position in the productive value chains as a supplier of raw materials, with the difference that it now has new trading partners — also, this explains why Rafael Correa's partnership with Alianza País was considered part of the '*commodities* consensus' (Svampa, 2015). There have been insufficient progressive and coherent policies for changing the productive structure towards sectoral diversification (Villalba-Eguiluz & Etxano, 2017). Despite fine definitions in the PNBV I and II, there were no substantial changes in policy implementation that could establish a relation between product diversification and BV goals of life quality and harmonious relationship with nature. The maintenance of extractivism to sustain the dynamics of inequality reduction ended up creating an inconceivable dichotomy between material well-being and ecological sustainability.

Conflicts with ecological movements are a worrying sign about the ability of communities to exercise decision-making power over the use of land and its products. It coincides with an analysis of Ecuadorian agrarian policy that describes how state intervention in agriculture has sustained transformations of power relations within this branch of the economy, not to make them fairer, but rather to reinforce the dominance of capital (Madrid Tamayo, 2019). The cited author describes how agroindustry became more concentrated in a smaller number of large companies after the period driven by the neoliberal agenda — which is a continuous conflict as some of these activities are less intensive in labor force and are driven by exports.

It also coincides with what has been cited about the precariousness of labor in bioeconomy sectors, being one more element for contradictions in Ecuadorian contemporary configuration: a primary-export productive matrix persists, but at the same time economic and social advances have been made, and such as the overcome of a deep crisis that led to dollarization, the amplified access to infrastructure and the reduction of inequality (Garcia Álvarez, 2016). As we have already said, raising income and employment through extractive activities are necessary for reducing social inequality and bringing well-being for Ecuadorians, but not sufficient as environmental concerns and community participation play a positive influence on life satisfaction (Guardiola & García-Quero, 2014) The success in reducing inequality and expanding the productive structure is certainly an important achievement of the Citizen Revolution period, but not so different than in other South American countries that have passed through progressive years with greater annual

rates of growth than "others" national governments but were not able to provoke deep structural changes (Fernandez, 2021). The dependence on oil activity is still a cause for concern not only due to the volatility of the international prices, but also because Ecuador's proven crude oil reserves may be exhausted by mid-2026 (Torres, Zumárraga, & López, 2020). Anyhow, the expansion of the extractive frontier into ecologically sensitive areas should be avoided, assuming the precautionary principle for a post-oil society (Vallejo et al., 2015). From another perspective, evidence revealed that in countries highly dependent on commodity prices and US interest rates, voters' assessments of political mandataries were determined by these exogenous factors (Campello & Zucco, 2016) — which could be another form to approach the problem of what kind of policy a Latin American country should consider towards a socioecological transition.

## 5. Conclusions

We now understand that clashes around BV perspectives are concentrated on two major differences: the structural change relies heavily on assuming alternatives to development overcoming Eurocentric paradigms or by facing socioeconomic capitalist structures towards satisfying needs through a renewed form of socialism. However, we found that concrete mechanisms and policies for operationalizing such a kind of transition are still lacking. Our intention was to contrast BV with Latin American structuralism and some pioneers of development, because in our understanding it is necessary to incorporate historical contributions from the latter that are fundamental to achieve mechanisms for policymakers to prepare transitions. This contribution could inspire other countries in similar conditions and with similar aspirations.

Our empirical analysis identified an improvement in the GDP structure induced by public spending towards infrastructural investment. However, regarding industries with a high level of technology, we have not identified a substantial trend in our MVA analysis. Intensifying the oil and mining industry led to improved infrastructure through public investment to serve the needs of this branch of the economy, which on the one hand improved the government's fiscal position to finance social programs against income inequality, but on the other hand, it also intensified the extractivist profile. This is in alignment with the high FDI towards raw materials in Ecuador, which contributed significantly to further the actual position of the country in the international division of labor: provider of extractive products with a low value-chain. Despite infrastructural improvement in new hydropower plants to provide new renewable energy sources, the country is still

heavily dependent on fossil fuel energy. Finally, the improvement in employment inside key sectors — such as manufacturing and bioeconomy — is still far away from the empowerment of working classes towards the arrangements and better conditions inside these economic activities.

For all the reasons presented in section 3, our hypothesis that the evolution of the Ecuadorian economy has not enabled development - as defined in the original formulations of BV - seems correct. The strategy defined in the development plans during the government of Rafael Correa/ Alianza Pais aimed at changing the production matrix but was not sufficient for overcoming structural heterogeneity and for the objectives of BV — on the contrary, it has reinforced dependency and backwardness.

Latin American historical experience shows that the harnessing of natural resources for the development of its own biotechnologies in line with the will of the people cannot occur spontaneously in response to market signals, but through active industrial and technological policies (ECLAC, 2018). In this context, the question is whether a country with a small, liberalized economy, subject to being stuck in productive specialization, can achieve a product diversification that promotes income redistribution while remaining immersed in a rigid regulatory system predetermined by the institutionalization of free trade as the single option for international integration (Falconí & Oleas-Montalvo, 2016).

In the case of Ecuador, the best possibilities for scaping from this place at the international division of labor while promoting BV seem to be connected with the effective implementation of the new strategies for biodiversity and biotechnology. Still, it is desirable to build these strategies through bottom-up practices with applicability beyond niche circles, which means in the case of BV to consider it as a practical, plural tool to empower communities (Chassagne, 2019).

However, it is a great challenge because requires furthering the disputes within the state, and fighting against strong elites. It would be, then, a key extension of this research to understand the possible paths to renew power and wealth coalitions in favor of workers' and poor people's interests. A possible starting point would be verifying the impact of the wealth redistribution in the 2017 and 2021 elections of politicians that defend the principle of BV.

Moreover, considering the task to advance research agendas in the Global South by looking at the elements of nature in political economy analyses closely and inwardly to collectivities, BV in Ecuador has brought a historical legacy for improving the

bioconsciousness and for showing strong institutional and structural challenges. Degrowth in industrialized countries, and post-extractivism in Latin America – such as the outstanding work of Alberto Acosta -, are theoretical fields that emerged to contribute to medium and long-term transformations and may gain greater space in the academic literature in the coming years.

## References


Acosta, A. (2016), *O bem viver: uma oportunidade para imaginar outros mundos*. São Paulo: Autonomia Literária, Elefante

Amin, S. (2017), "The Agrarian Question a Century after October 1917: Capitalist Agriculture and Agricultures in Capitalism." *Agrarian South: Journal of Political Economy: A triannual Journal of Agrarian South Network and CARES*. 6(2): 149–174.

Banco Central del Ecuador (2017), "Cuentas Nacionales n.30 (2007-2017p)." Quito.

Banco Central del Ecuador (2017), "Matriz de Contabilidad Social 2007 y 2014." Quito.

Banco Central del Ecuador (2018), "Estadísticas macroeconómicas presentación estructural".

Banco Central del Ecuador (2020), "Estadísticas Macroeconómicas: presentación coyuntural." Quito.

Banco Central del Ecuador (2020), "Formación Bruta de Capital Fijo (2007 - 2018p)." Quito.

Bielschowsky, R. (2009), "Sesenta años de la cepal: Estructuralismo y neoestructuralismo." *Revista de la CEPAL* 2009 (97): 173–194

Campello, D. and Zucco, C. (2016), "Presidential success and the world economy." *Journal of Politics*. 78(2): 589–602

Cardoso, F. G. (2018), *Nove Clássicos do Desenvolvimento Econômico*. Jundiaí: Paco Editorial

Cardoso, F. G. and Reis, C.F.B. (2018), "Centro e Periferia nas Cadeias Globais de Valor: uma interpretação a partir dos pioneiros do desenvolvimento." *Revista de Economia Contemporanea*. 22(3): 1–32

Carrión Sánchez, D. (2019), "Los números también mienten: subempleo y estadística laboral en el Ecuador." *Revista Economía*. 70(112): 121–136

Chassagne, N. (2019), "Sustaining the 'Good Life': Buen Vivir as an alternative to sustainable

development." *Community Development Journal.* 54(3): 482–500

Cubillo-Guevara, A. P., Hidalgo-Capitán, H.L., and García-Álvarez,S. (2016), "El Buen Vivir como alternativa al desarrollo para América Latina." *Iberoamerican Journal of Development Studies.* 5(2): 30–57

Dávalos, P. (2016), *Alianza PAIS o la reinvención del poder: siete ensayos sobre el posneoliberalismo en el Ecuador*. Bogotá: Desde abajo

Dussel, E. (2000), "Europa, modernidad y eurocentrismo". En Edgardo Lander (comp.), *La colonialidad del saber: eurocentrismo y ciencias sociales. Perspectivas latinoamericanas*. Buenos Aires: CLACSO, pp. 41-54.

ECLAC (1994), *El regionalismo abierto en América Latina y el Caribe: la integración económica al servicio de la transformación productiva con equidad.* Santiago: CEPAL. doi:10.18356/7b0ff9b2-es

ECLAC (2018), "Perspectivas do Comércio Internacional da América Latina e do Caribe: as tensões comerciais exigem uma maior integração regional"

Ecuador (2008), "Constitución de la República del Ecuador." http://www.asambleanacional.gov.ec/documentos/%0Aconstitucion_de_bolsillo.pdf

Agencia de Regulacion y Control de Electricidad (2020), "Balance Nacional de Energía Eléctrica a abril de 2020." Quito: Ecuador

Escobar, A. (2010), *Una minga para el postdesarrollo: lugar, medio ambiente y movimientos sociales en las transformaciones globales*. Lima: Universidad Nacional Mayor de San Marcos

Falconí, F. and Oleas-Montalvo, J. (2016), "Citizens ' revolution and international integration : obstacles and opportunities in world trade". 43 (1): 2020

Fernandez, R. G. (2021), "South America in the Twenty-First Century: Twenty Years on a Roller Coaster." *Journal of Economic Issues.* 55 (2): 306–317

Furtado, C. (1974 [1985]), *O mito do desenvolvimento econômico*. São Paulo: Círculo do Livro

Garcia Álvarez, S. (2016), *Sumak kawsay o buen vivir como alternativa al desarrollo en Ecuador*. Quito: Universidad Andina Simón Bolívar / Ediciones Abya-Yala

Gramkow, C. (2019), "O Big Push Ambiental no Brasil." *Série Perspectivas- Fundação Firiedrich Ebert.* (20): 31

Guardiola, J. and García-Quero,F. (2014), "Buen Vivir (living well) in Ecuador: Community and environmental satisfaction without household material prosperity?" *Ecological Economics*. 107: 177–184. Elsevier B.V.

Gudynas, E. (2011), "Sentidos, opciones y ámbitos de las transiciones al postextractivismo." p. 323 *Más Allá del Desarrollo*. Quito: Fundación Rosa Luxemburg

Gudynas, E. and Acosta, A. (2011), "El buen vivir o la disolución de la idea del progreso." pp. 103–110*La medición del progreso y el bienestar. Propuestas desde América Latina*. México DF: Foro Consultivo Científico y Tecnológico de México

Hidalgo-Capitán, A. L. and Cubillo-Guevara, A.P. (2018), "Orto y ocaso del buen vivir en la planificación nacional del desarrollo en Ecuador (2007-2021)." *América Latina Hoy*. 78(0): 37

Huanacuni, F. (2010), *Buen Vivir / Vivir Bien Filosofía, políticas, estrategias y experiencias regionales andinas. Coordinadora Andina de Organizaciones Indígenas (CAOI)*. Lima: Coordinadora Andina de Organizaciones Indígenas (CAOI). https://www.reflectiongroup.org/stuff/vivir-bien

INEC (2017), "Panorama Laboral y Empresarial del Ecuador"

INEC (2022), *Encuesta Nacional de Empleo, Desempleo y Subempleo (ENEMDU): Indicadores Laborales marzo 2022*. Instituto Nacional de Estadística y Censos. https://www.ecuadorencifras.gob.ec/documentos/web-inec/EMPLEO/2022/Marzo-2022/202203_Mercado_Laboral.pdf

Instituto de Investigación Geológico y Energético - IIGE (2021), "Balance Energetico Nacional." *Ministerio de Energía y Recursos Naturales No Renovables*.

Latorre, S., Farrell, K.N., and Martínez-Alier, J. (2015), "The commodification of nature and socio-environmental resistance in Ecuador: An inventory of accumulation by dispossession cases, 1980-2013." *Ecological Economics*. 116: 58–69. Elsevier B.V.

Madrid Tamayo, T. (2019), "La política agraria en Ecuador (1965-2015)." *Revista Economía*. 70 (112): 89–120

Meireles, M. (2014), *Soberanía Monetaria y Alternativas de Desarollo en Ecuador desde el Pensamiento Económico Latinoamericano*. Universidad Nacional Autónoma de México

Muñoz Jaramillo, F., Garcia Álvarez, S., Carrión Sánchez, D., Gachet, F., and Unda, M.

(2014), *Balance crítico del Gobierno de Rafael Correa.* (Francisco Muñoz Jaramillo, ed.). Quito: Universidad Central del Ecuador

Myrdal, G. (1957), *Economic Theory Under-Developed regions*. London: General Duckworth & Co.

Observatory of Economic complexity. *Ecuador Exports; ECI Index*. Datawheel. Available in, last acessed May 12th, 2022: https://oec.world/

Ortega-Pacheco, D., Castro-Verdezoto, P.L., Jiménez, M.J.M., Benalcázar, E.A., and Castro, M.P. (2021), "Social and Economic Contribution of the Bioeconomic Sector in Ecuador: A Methodological Approach." p. 347*Sustainable Bioeconomy: Pathways to Sustainable Development Goals*. Singapore: Springer Nature Singapore

Ortega-Pacheco, D., Silva, A., López, A., Espinel, R., Inclán, D., and Jiménez, M.J.M. (2018), "Hacia una bioeconomia sostenible: un enfoque desde Ecuador" (August). http://dspace.ups.edu.ec/handle/123456789/14450

Prebisch, R. (1949 [2000]), "O desenvolvimento econômico da América Latina e alguns de seus principais problemas." *Cinquenta anos de pensamento da Cepal.* Rio de Janeiro: Record.

Quang, M. and Vercoutére, T. (2013), *Ecosocialismo y Buen Vivir: diálogo entre dos alternativas al capitalismo*. Quito: Editorial IAEN

Quijano, A. (2000), "Colonialidad del poder, eurocentrismo y América Latina". En Edgardo Lander (comp.), *La colonialidad del saber: eurocentrismo y ciencias sociales. Perspectivas latinoamericanas*. Buenos Aires: CLACSO, pp. 201-246.

Ramírez, R. (2010), "Socialismo del Sumak Kawsay o biosocialismo republicano." *Secretaría Nacional de Educación Superior, Ciencia, Tecnología e Innovación.* (July): 53

Reis, C. F. de B., Barbosa, M.S., and Cardoso, F.G. (2019), "The South ' s Thoughts on Development : Links Between Latin America and Africa." *Revista De Economía Mundial.* 52 (September): 191–216

Rodriguez, A. G., Hitschfeld, M.A., and Mondraini, A.O. (2017), *Bioeconomía en América Latina y el Caribe: contexto global y regional y perspectivas.* ( No. 215). Desarrollo Productivo. Santiago

Rodríguez Salazar, A. (2016), *Teoría y práctica del Buen Vivir: Orígenes, debates conceptuales y conflictos sociales. El caso de Ecuador.*

dos Santos, F. L. B. (2018), *Uma história da onda progressista sul-americana (1998-2016)*. São Paulo: Elefante

SENPLADES (2009), "Plan Nacional para el Buen Vivir 2009-2013: Construyendo un Estado Plurinacional e Intercultural." Quito: SENPLADES

SENPLADES (2013), "Plan Nacional para el Buen Vivir 2013-2017." Quito: SENPLADES

Svampa, M. (2013), "Consenso de las commodities." *Nueva Sociedad*. 244: 30–46

_____. (2015), "Commodities consensus: Neoextractivism and enclosure of the commons in Latin America." *South Atlantic Quarterly*. 114 (1): 65–82

Torres, R. A., Zumárraga, M., and López, M.P. (2020), "El extractivismo en Sudamérica: ¿Por qué no nos ha desarrollado? Una lectura desde el Ecuador." *Revista Economía*. 71 (113): 107–123

United Nations (2021), "CEPALSTAT." https://estadisticas.cepal.org/

UNIDO (2020), *INDSTAT 2 Industrial Statistics Database at 2-digit level of ISIC Revision 3*. Vienna. https://stat.unido.org/ Accessed December15, 2020

Vallejo, M. C., Burbano, R., Falconí, F., and Larrea, C. (2015), "Leaving oil underground in Ecuador: The Yasuní-ITT initiative from a multi-criteria perspective." *Ecological Economics*. 109: 175–185. Elsevier B.V.

Villalba-Eguiluz, C. U. and Etxano, I. (2017), "Buen Vivir vs Development (II): The Limits of (Neo-)Extractivism." *Ecological Economics*. 138: 1–11. Elsevier B.V.

# O DEBATE SOBRE DESENVOLVIMENTO NA AMÉRICA LATINA NA ÓTICA DOS REGIMES DE CRESCIMENTO *WAGE-LED* E *PROFIT-LED*

*The Debate About the Latin American Development Under the Wage-Led and Profit-Led Growth Regimes Approach*

**Pedro Celso Rodrigues Fonseca***

**Ricardo Azevedo Araújo†**

## Resumo

O presente estudo teve por objetivo identificar referências aos conceitos de regime de crescimento *wage-led* e *profit-led* no pensamento estruturalista latino-americano. Para tanto, inicialmente apresenta-se os modelos de crescimento kaleckianos. Em seguida, discute-se as seguintes teses estruturalistas: a crítica à teoria das vantagens comparativas de Prebisch, o estagnacionismo de Furtado e a crítica ao estagnacionismo de Tavares e Serra. Após a análise destas, foi possível perceber que apesar de não explicitarem formalmente, identifica-se nos estruturalistas referências aos regimes de crescimento provenientes dos modelos kaleckianos.

**Palavras-chave**: Crescimento e distribuição; Estruturalismo latino-americano; Desenvolvimento.
**Códigos JEL**: E02; E12; O41; N16 .

## Abstract

This study aimed to identify references to the concepts of wage-led and profit-led growth regime in Latin American structuralist thinking. To do so, we initially review Kaleckian growth models. Then, the following structuralist theses were discussed: the Prebisch's critique of comparative advantage theory, Furtado's stagnationism, and Tavares and Serra's critique of stagnationism. After this analysis, it was possible to realize that, although not formally explicit, references from kaleckian growth regimes are identified in structuralist.

**Keywords**: Growth and distribution; Latin American economic structuralism; Development.
**JEL Code**: E02; E12; O41; N16.

* Economista, PhD pela Universidade de Brasília. E-mail: pedro_celso2004@yahoo.com.br
† Professor do Departamento de Economia da Universidade de Brasília. E-mail:rsaaraujo@unb.br

## 1. Introdução

Entre os objetivos da teoria pós-keynesiana, vale destacar a combinação dos princípios clássicos de crescimento e distribuição com o princípio da demanda efetiva de Keynes e Kalecki. Tal combinação se refere à extensão do modelo keynesiano de curto-prazo para a análise do desenvolvimento de longo prazo, isto é, o foco passa do nível do produto e do emprego para a taxa de crescimento do produto, a taxa de lucro e a taxa de utilização da capacidade (Hein, 2014). Busca-se, assim, estender a teoria keynesiana às análises de acumulação de capital, ao progresso tecnológico, à distribuição funcional da renda etc.

Os modelos keynesianos de crescimento e distribuição[1] possuem como característica fundamental a independência entre o investimento e a poupança, com destaque para a determinação unilateral da poupança pelo investimento. Além disso, eles consideram, em longo prazo, a plena utilização da capacidade produtiva.

Kalecki (1983, 1954) discordava da hipótese do investimento exogenamente determinado e, devido à importância deste na dinâmica econômica, seria fundamental identificar os seus determinantes. Adicionalmente, ele abandona a hipótese de plena utilização da capacidade produtiva em longo prazo. Em linhas gerais, um modelo é denominado kaleckiano com as seguintes características: a) função de investimento que depende de diversas variáveis, em particular, a taxa de utilização da capacidade produtiva; b) os preços dependem dos custos de produção e são dados; e, c) a capacidade produtiva não é plenamente utilizada (Lavoie, 2014).

O modelo kaleckiano portador das características supramencionadas foi desenvolvido por diversos autores, além do próprio Kalecki, como Rowthorn (1981), Dutt (1990), Taylor (1985), entre outros.

Diante do exposto, o presente estudo buscou explorar a versão de Bhaduri e Marglin dos modelos kaleckianos (1990, 1995) – autores que observaram que, a partir dos anos 1970, a redução do crescimento nos países desenvolvidos foi marcada pela menor participação dos lucros no produto (*profit squeeze*). No intuito de explicar o fenômeno em questão, aqueles autores destacam que, ao mesmo tempo em que os salários ampliam a demanda, eles representam custo de produção, acarretando a redução da participação dos lucros no produto

[1]Refere-se aos modelos de Robinson (1956), Kaldor (1957), e Pasinetti (1962)

e, consequentemente, a redução dos lucros esperados. Logo, se reduz o investimento por parte dos capitalistas[2].

Destarte, Bhaduri e Marglin (1990, 1995) afirmam que dependendo das circunstâncias, a economia pode ser caracterizada por dois tipos de regime, quais sejam: 1) *Wage-led*; e 2) *Profit-led*[3]. Assim, para a promoção do crescimento de certas economias, é preciso a adoção de políticas que promovam a elevação do *wage-share* ou do *profit-share*, respectivamente.

A caracterização das economias em regime de crescimento *wage-led* e *profit-led* foi estendida em diversos trabalhos que, inclusive, aplicaram testes empíricos para identificar qual regime predominava em certos países (Hein, 2014; Lavoie, 2014). Recentemente, Rugitsky (2016) realizou paralelismo entre dois episódios da história do pensamento econômico. O primeiro é o desenvolvimento teórico que se inicia no estagnacionismo de Steindl (1952) e resulta no debate sobre regimes de crescimento presente em Bhaduri e Marglin (1990), Taylor (1985) etc. O segundo é o debate latino-americano que se inicia com o estagnacionismo de Furtado (1966) e a crítica de Tavares e Serra (1971/1976), que resulta nos modelos de Taylor e Bacha[4]. Nesse ínterim, o presente artigo buscou avançar no debate proposto por Rugitsky (2016), mas, ao invés de identificar o paralelismo, objetivou verificar se é possível identificar em três importantes teses do estruturalismo latino-americano a concepção de economia sob o regimes de crescimento *wage-led* e/ou *profit-led*, quais sejam: 1) A deterioração dos termos de troca, presentes nas obras de Prebisch (1949, 1964): "*O desenvolvimento econômico na América Latina e algum de seus principais problemas*" e "*Dinâmica do desenvolvimento latino-americano*"; 2) A tendência à estagnação da economia, presente em "*Subdesenvolvimento e estagnação na América Latina*", de Celso Furtado (1966); e, 3) A crítica à tese da estagnação, presente em "*Além da estagnação*", de Maria da Conceição Tavares e José Serra (1974).

---

[2] Essa interpretação não é consensual entre os kaleckianos, vide Steindl (1976, p.253): "o aumento dos salários jamais reduziria os lucros desde que o investimento (e o consumo capitalista) permanecesse elevado; uma queda nos salários jamais aumentaria os lucros, a menos que o investimento aumentasse primeiro". De toda forma, não é objeto deste trabalho adentrar nessa discussão.

[3] "The central point [...] is to draw a distinction between a theory of a capitalist economy in which aggregate demand plays a central role, and models built on particular assumptions about the components of aggregate demand. It is our position that while both the general theory of specific models may hold at certain times, the models are much more bound by time and place than is a theory based on the centrality of aggregate demand" (Bhaduri & Marglin, 1990, p. 155).

[4] Do original: "Their model represents for the Latin American story the same transition that Rowthorn's (1981), Dutt's (1984), Taylor's (1985) models represented to the Kaleckian thread" (Rugitsky, 2016, p. 10).

Reconhece-se que o conceito de desenvolvimento utilizado pelos estruturalistas é mais amplo e complexo do que o de crescimento presente no modelo de Bhaduri e Marglin. No entanto, como afirmado, procura-se identificar nas teses estruturalistas selecionadas concepções teóricas que se remetem aos regimes de crescimento provenientes do modelo kaleckiano, nesse sentido consideram-se políticas concentradoras de renda como próximas ao regime profit-led de crescimento[5].

Nesse intuito, na segunda seção tem-se o modelo de crescimento e distribuição kaleckiano, em particular, o proposto por Bhaduri e Marglin (1995), cujos resultados permitem a identificação dos regimes de crescimento: *wage-led* e *profit-led*. A terceira seção é subdividida em três subseções que analisam as teses supramencionadas, identificando ali a presença de argumentos que fazem referência aos regimes de crescimento citados. Por fim, na quarta seção têm-se as principais conclusões.

## 2. O modelo de crescimento e distribuição kaleckiano

Em Kalecki, a dinâmica econômica é dada pelo investimento (Lopes & Assous, 2010). Por isso, a importância em identificar os determinantes da taxa de investimento.

No modelo aqui discutido, as hipóteses iniciais são: economia capitalista formada por empresas em grande número que produzem diversos bens e serviços; economia composta por trabalhadores e capitalistas; as empresas são verticalmente integradas; adota-se a empresa representativa; o governo e o mercado externo são negligenciados; o mercado interno é imperfeito; o nível de produção depende da disponibilidade de força de mão de obra; a demanda dos bens e serviços finais consiste em: a) demanda dos capitalistas por bens de consumo e bens de investimento; e, b) demanda dos trabalhadores por bens de consumo; os trabalhadores não poupam e o seu nível de demanda varia com a produção; e, a produtividade do trabalho e do capital é dada e constante (não há retornos marginais decrescentes).

Kalecki assume indústrias verticalmente integradas no sentido de que elas não compram insumos uma das outras (Lopes & Assous, 2010). Nesse sentido, o valor total da produção pode ser decomposto em salários e lucro bruto. Assim, o produto nacional bruto calculado pela ótica da renda e do produto corresponde a soma do investimento bruto com o consumo dos capitalistas e trabalhadores.

[5] Nem sempre políticas concentradoras de renda significam redução do wage-share, podem ser provenientes do aumento da desigualdade intra-salarial. No entanto, para fins de simplificação não se desenvolve essa análise no presente artigo.

Sob a hipótese de que os trabalhadores não poupam, tem-se que o consumo dos trabalhadores é igual aos salários. Logo, tem-se que o lucro bruto é igual ao investimento adicionado ao consumo dos capitalistas.

A partir daí, Kalecki (1983) deduz o princípio da demanda efetiva, ou seja, uma vez que os capitalistas possuem a autonomia de decisão sobre os seus gastos, e não sobre os seus ganhos, tem-se que os aspectos investimento e consumo determinam os lucros, e não o contrário – os capitalistas ganham o que gastam. É importante destacar que a condição prévia para a validade do princípio da demanda efetiva é a elasticidade positiva da produção em relação à demanda. Assim, o deslocamento da demanda não se transferirá integralmente para os preços (Lopes e Assous, 2010).

De modo simplificado, esse princípio é representado por:

$$I = s_p \Pi \tag{1}$$

Onde: I = investimento bruto; $s_p$ = propensão a poupar dos capitalistas; e, $\Pi$ = lucro bruto.

E dividindo a Equação (1) pelo estoque de capital da economia K, obtém-se a denominada equação de Cambridge[6], conforme se segue:

$$r = \frac{g}{s_p} \text{ ou } g = s_p r \tag{2}$$

Onde: $r = \Pi/K$= taxa de lucro; e, $g = I/K$ = taxa de acumulação de capital.

A Equação (2) determina a taxa de lucro pelo lado da demanda, ou seja, é a taxa de acumulação da economia, g, que determina a taxa de lucro[7], que também pode ser mensurada pelo lado da oferta, a partir da identidade fornecida pelas contas nacionais – o produto nacional corresponde à soma dos salários e lucros, conforme a Equação (3) que se segue:

$$pq = wL + rpK \tag{3}$$

Onde: p = nível de preços; q = nível de produto real; w = taxa de salário nominal; L = nível de emprego; r = taxa de lucro; e, K = estoque de capital.

[6] Robinson (1962), Kaldor (1957) e Pasinetti (1962).
[7] "[...] são suas (dos capitalistas) decisões quanto ao investimento e consumo que determinam os lucros e não vice-versa" (Possas & Baltar, 1981, p. 114).

Dividindo a Equação (5) por q, obtém-se $p = w\left(\frac{L}{q}\right) + rp\left(\frac{K}{q}\right)$, e definindo $l = L/q$, $\mu = q/q_{fc}$ e $\upsilon = K/q_{fc}$, onde $q_{fc}$ = nível de produto sobre plena capacidade produtiva, tem-se $p = wl + rp\,(\upsilon/\mu)$. Vale destacar que $\mu$ corresponde ao grau de utilização da capacidade produtiva e $\upsilon$ a razão entre o capital e o produto. Destarte, isolando r, tem-se a Equação (4) que se segue:

$$r^{pc} = \frac{\mu}{v}\left[1 - \left(\frac{w}{p}\right)l\right] \tag{4}$$

A Equação (4) foi denominada por Rowthorn (1981) de *profit cost curve*. A partir daí se infere que a taxa de lucro depende da taxa de salário real e do grau de utilização da capacidade produtiva. Kalecki (1951), então, diferencia seu modelo das primeiras abordagens sobre o crescimento e a distribuição keynesiana, pois assume o grau de utilização da capacidade produtiva inferior a unidade – fato que permite o salário real e a participação do salário na renda serem afetados pelo conflito distributivo no modelo.

Quando comparadas as Equações (2) e (4), é possível perceber que não se tem relação estabelecida entre a taxa de acumulação e o salário real – a mesma taxa de salário real é compatível com diferentes taxas de acumulação: "*The result is that a higher rate of growth can be achieved without the real wage being smaller. Differences in the rate of accumulation* […] *do not require changes in the real wage rate* (Ciccone, 1986, p. 299)".

Kalecki (1951) fundamenta microeconomicamente a sua teoria de crescimento via hipótese de mercados imperfeitos e oligopólio. Em particular, aquele estudioso teve por foco a formação dos preços e das margens de lucro em condições de mercados oligopolistas. Por isso, a importância do conceito de grau de monopólio: "[…] *each firm in an industry arrives at the price of its product by marking up its direct cost, consisting of average costs of wages plus raw materials, in order to cover overheads and profits* (Kalecki, 1971, p. 99 *apud* Lee, 1999, p. 145)".

> […] o conceito de grau de monopólio exprime não só a concorrência entre capitalistas, como também o confronto entre estes e os trabalhadores, contém em si o processo pelo qual se dá a distribuição de renda entre lucros e salários a nível de empresa (Possas & Baltar, 1981, p. 123).

No modelo kaleckiano aqui exposto adota-se, de forma simplificada, a seguinte equação dos preços:

$$p = (1 + \theta)wl \tag{5}$$

Em que θ corresponde ao *mark up* sobre os custos, os quais são constituídos somente pela força de trabalho[8]. Assim, substituindo a Equação (5) na Equação (4), tem-se a Equação (6) que se segue:

$$r^{pc} = \frac{\theta}{1+\theta}\left(\frac{\mu}{v}\right) \tag{6}$$

A Equação (12) representa a determinação da taxa de lucro pela firma representativa de Kalecki. Dado que r = Π/K, verifica-se que $\frac{\theta}{1+\theta} = \frac{\Pi}{q}$ , dado que h = $\frac{\theta}{1+\theta}$ consiste na participação dos lucros na renda tem-se a Equação (7):

$$r^{pc} = h\left(\frac{\mu}{v}\right) \tag{7}$$

*"This led Kalecki to posit that the distribution of income is determined by the price/unit cost ratio, on degree of monopoly, a term summarizing a variety of oligopolistic and monopolistic features* (Lopes & Assous, 2010, p. 68)".

Cumpre destacar que, apesar do *profit share* depender do grau de monopólio, os lucros são determinados pelos gastos dos capitalistas; ou seja, para completar o modelo, faz-se importante expor como a taxa de acumulação é determinada.

> *Profits do not only need to be produced, they also need to be realized. This will only occur when there is a similar amount of higher capitalist expenditure. If capitalist expenditure remains unchanged, profits will remain constant too* (Lopes & Assous, 2010, p. 77).

A função investimento proposta por Kalecki foi modificada no decorrer dos anos pelo autor no âmbito de sua teoria do ciclo econômico. Nos modelos de 1939 e 1943, ele adotou uma função investimento não linear, pois assumia que a taxa de lucro corrente dependeria das expectativas dos lucros. Posteriormente, ele adotou novamente[9] a função de investimento linear. Segundo Lopes e Assous (2010), tal fato se deu porque Kalecki havia se convencido que choques erráticos poderiam manter o ciclo econômico.

Assim, no modelo simplificado em questão, inicialmente, seguir-se-ão as ideias de Rowthorn (1981), Lavoie (1992) e Hein (2008), onde a função investimento padrão depende de duas variáveis, quais sejam: 1) A taxa de lucro corrente, r, que serve como indicador dos lucros futuros[10] e provê os fundos para reinvestimento; e, 2) o grau de utilização da

[8] Muitos autores segmentam a força de trabalho entre trabalhadores fixos e trabalhadores variáveis. No presente estudo, de modo a simplificar a análise, adota-se, como Hein (2008), apenas a força de trabalho como uma variável agregada.
[9] No modelo de 1933, Kalecki adota uma função investimento linear (Lopes & Assous, 2010).
[10] Aqui se evidencia a semelhança entre o modelo de Robinson e de Kalecki. Ela explicita a taxa de lucro futura na determinação da função investimento, pois Kalecki considera como proxy desta a taxa de lucro corrente.

capacidade, μ, que é inferior à unidade, uma vez que as firmas possuem capacidade produtiva para atender a demanda futura.

Formalmente, tem-se, então, a Equação (8) que se segue:

$$\frac{I}{K} = g(r, \mu) = \alpha + \beta r + \gamma \mu \tag{8}$$

Assume-se que $\beta > 0, \gamma > 0$ e $\alpha > 0$. Este último representa o componente autônomo da acumulação de capital – o *animal spirit* do investidor. Igualando as Equações (8) e (2), obtém-se a curva de realização dos lucros:

$$r^{ED} = \frac{\gamma}{s_p - \beta}\mu + \frac{\alpha}{s_p - \beta} \tag{9}$$

Assim, o modelo pode ser resumido a partir das Equações (7) e (9). Rowthorn (1981) destaca que no modelo kaleckiano a causalidade tem início no investimento, que determina a renda e, consequentemente, a poupança. Logo, em qualquer situação de equilíbrio, a economia deve se situar sobre a curva de realização dos lucros: $r^{ED}$.

Destarte, igualando $r^{ED}$ à $r^{PC}$, é possível obter as posições de equilíbrio evidenciadas nas Equações (10), (11) e (12) que se seguem:

$$\mu^* = \frac{\alpha v}{h(s_p - \beta) - \gamma v} \tag{10}$$

$$r^* = \frac{h\alpha v}{h(s_p - \beta) - \gamma v} \tag{11}$$

$$g^* = \frac{s_p h\alpha v}{h(s_p - \beta) - \gamma v} \tag{12}$$

A condição de estabilidade do modelo é dada por $s_p > \beta + \frac{\gamma v}{h}$, garantindo a inclinação positiva de $r^{ED}$ inferior a inclinação de $r^{PC}$[11].

O modelo apresentado fornece os importantes resultados evidenciados nas Equações (13) e (14), a seguir, a partir de exercícios de estática comparativa.

$$\frac{dg^*}{ds_p} = -\frac{h^2 \alpha v \beta + \gamma v}{[h(s_p - \beta) - \gamma v]^2} < 0 \tag{13}$$

$$\frac{du^*}{dh} = -\frac{\alpha v - (s_p - \beta)}{[h(s_p - \beta) - \gamma v]^2} < 0; \frac{dr^*}{dh} = -\frac{\alpha h v^2}{[h(s_p - \beta) - \gamma v]^2} < 0; \frac{dg^*}{dh} = -\frac{s_p \alpha h v^2}{[h(s_p - \beta) - \gamma v]^2} < 0 \tag{14}$$

[11] Trata-se da condição de estabilidade keynesiana, a qual garante a existência do equilíbrio.

O resultado expresso na Equação (13) aponta o famoso paradoxo da poupança: quanto maior a poupança dos capitalistas, menor a taxa de acumulação da economia. Já o resultado expresso na Equação (14), por sua vez, aponta o paradoxo dos custos, pois quanto maior o *profit share*, menor a taxa de acumulação; ou seja, quanto maior o *wage share* (custos de produção), maior será a taxa de crescimento.

O paradoxo dos custos é interessante, pois evidencia que se todas as firmas da economia elevarem a participação dos salários no produto (os salários reais), a taxa de lucro da economia, ao invés de reduzir, aumentará.

> *If a single firm raises real wages and reduces its costing margins, everything else being equal, it will obviously make less profit and it will face a reduction in its profit rate (unless there are wage efficiency effects). But if all firms increase their real wages together, this will generate a higher rate of capacity utilization for the whole economy, and, through the induced effects, linked to a sort of accelerator effect, it will lead to a higher macroeconomic profit rate* (Lavoie, 2014, p. 367).

Vale destacar a ocorrência do paradoxo da poupança e dos custos, pois não se assume, em longo prazo, a plena utilização da capacidade produtiva. Apesar dos resultados interessantes, a partir dos anos 1970, verificou-se que a redução do crescimento nos países desenvolvidos foi marcada pela redução da participação dos lucros no produto (*profit squeeze*), ou seja, a elevação dos salários na economia não estava promovendo o crescimento.

Fazendo uso do modelo kaleckiano, Bhaduri e Marglin (1995) reconciliaram o argumento do esmagamento dos lucros e o princípio da demanda efetiva. Para tanto, aqueles autores destacaram o efeito que a ampliação dos salários possui sobre os custos de produção, significando a redução da participação dos lucros no produto e, consequentemente, a redução dos lucros esperados. Logo, se reduz o investimento por parte dos capitalistas.

Formalmente, a interpretação de Bhaduri e Marglin (1995) faz referência à identidade $r = \frac{\Pi}{K} = \frac{\Pi}{q}\frac{q}{q_{fc}}\frac{q_{fc}}{K} = h\left(\frac{\mu}{\upsilon}\right)$ e a função (vide Equação (8)) de determinação do investimento. Para aqueles autores, se a taxa de lucro for constante, a ampliação da taxa de utilização da capacidade necessariamente implicará em redução da margem de lucro, acarretando efeitos negativos sobre a taxa de lucro.

De modo a sanar a questão, Bhaduri e Marglin (1995) propõem que na função investimento esteja expressa não a taxa de lucro, mas sim, o *profit share*, $\frac{I}{K} = g\,(h, \mu) = \alpha + \beta h + \gamma\mu$. Igualando à Equação (2), tem-se:

$$r^{ED} = \frac{\alpha}{s_p} + \frac{\beta h}{s_p} + \frac{\gamma\mu}{s_p} \qquad (15)$$

Nesse ínterim, a nova taxa de crescimento de equilíbrio obtida de $r^{ED'} = r^{PC}$ é $g^* = \frac{s_p h[\alpha + \beta h]}{s_p h - \gamma}$. Sendo a condição de estabilidade dada por $s_p > \frac{\gamma}{r_n}$, os exercícios de estática comparativa fornecem:

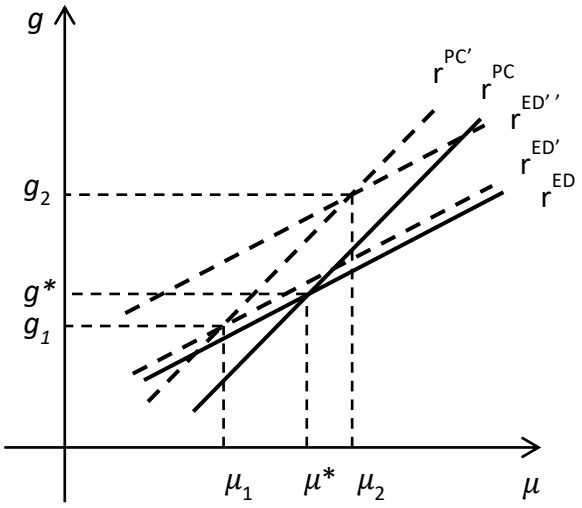
$$\frac{dg^*}{ds_p} = -\frac{\gamma h(\alpha + \beta h)}{(s_p h - \gamma)^2} < 0 \quad (16)$$

$$\frac{dg^*}{dh} = \frac{s_p(\beta h - \mu\gamma)}{s_p h - \gamma} \gtrless 0 \quad (17)$$

A Equação (16) evidencia que o paradoxo da poupança continua válido. No entanto, o resultado interessante é fornecido pela Equação (17), que não possui resultado pré-definido. Assim, se $\beta h > \mu\gamma$, a ampliação da margem de lucro eleva a taxa de acumulação; mas, se $\beta h < \mu\gamma$, a ampliação da margem de lucro reduz a taxa de acumulação.

Os dois possíveis resultados indicados pela Equação (17) são visualizados no Gráfico 2, a seguir. Nesse sentido, supondo a elevação de $h$, a curva de *profit cost* se elevará, deslocando-se para a esquerda: de $r^{PC}$ para $r^{PC\prime}$. Mas como $h$ afeta positivamente a curva de realização dos lucros, a curva $r^{ED}$ também se deslocará para a esquerda, e se for para $r^{ED\prime}$, o novo ponto de equilíbrio $(g_1, \mu_1)$ é inferior ao nível inicial $(g^*, \mu^*)$. Assim, $\beta r_n < \mu\gamma$. Mas se o deslocamento for para $r^{ED\prime\prime}$, o novo ponto de equilíbrio $(g_2, \mu_2)$ será superior ao nível inicial $(g^*, \mu^*)$, ou seja, $\beta r_n > \mu\gamma$.

**Gráfico 1 - Regimes de crescimento *profit-led* e *wage-led***



Os efeitos em questão foram classificados por Bhaduri e Marglin (1990) nos seguintes regimes:

a. Aceleracionista (*Exhilaration*): a ampliação do *profit share* afeta positivamente a taxa de utilização da capacidade produtiva e a taxa de crescimento do produto, caso $(g_2, \mu_2)$ do Gráfico 2;

b. Estagnacionista (*Conflicting stagnationism*): a ampliação do *profit share* afeta negativamente a taxa de utilização da capacidade produtiva e a taxa de acumulação da economia, caso $(g_1, \mu_1)$ do Gráfico 2.

Na literatura (Hein, 2014; Lavoie, 2017; Lavoie & Stockhammer, 2013), os regimes são denominados, respectivamente, *profit-led* e *wage-led* – classificação utilizada no presente estudo.

Após a proposição teórica de Bhaduri e Marglin (1990), diversos trabalhos empíricos foram realizados no intuito de identificar qual regime de crescimento predominante nos diversos países[12]. O resultado teórico foi elaborado na década de 1990 para os países desenvolvidos, no intuito de explicar a relação entre o *profit squeeze* e o crescimento. Na próxima seção procura-se mostrar em diversas teses do pensamento estruturalista latino-americano que é possível identificar concepções teóricas de política econômica semelhantes as provenientes dos dois regimes de crescimento formalizados por Bhaduri e Marglin.

## 3. O estruturalismo latino-americano

O pensamento econômico denominado estruturalismo latino-americano tem relação com a Comissão Econômica para a América Latina e Caribe (CEPAL), da Organização das Nações Unidas (ONU), pois, grande parte dos economistas ligados à essa corrente, em algum momento, participou da Comissão em questão, sendo seus trabalhos publicados sob o patrocínio da Comissão (Rodríguez, 2006). Estes autores tinham como objetivo identificar os principais problemas ao desenvolvimento econômico dos países da América Latina e Caribe, conforme evidenciado no título do texto de Raul Prebisch, de 1949, *The economic development of Latin America and its principal problems*, reconhecido como o "manifesto" do estruturalismo.

Ali, Prebisch, juntamente com os demais autores cepalinos, observou que o subdesenvolvimento é um processo de desenvolvimento que merece ser teorizado

[12] Cf. Hein (2014) e Lavoie (2014).

especificamente, com foco na análise das forças produtivas e na transformação das estruturas sociais e institucionais onde as forças atuam[13].

> A formação das modernas sociedades industriais é mais facilmente compreendida quando estudamo-la simultaneamente do ângulo de desenvolvimento de suas forças produtivas e do da transformação das estruturas sociais e do marco institucional dentro dos quais operam essas forças. O afastamento crescente desses dois enfoques, causado pela falsa especialização das ciências sociais, é responsável pelas dificuldades que hoje enfrentamos para equacionar problemas de desenvolvimento com respeito aos quais perdem validez os critérios tradicionais que permitiam diferenciar variáveis econômicas e não econômicas. Os obstáculos opostos por esse inadequado enfoque metodológico à captação da realidade social avolumam-se no caso do estudo das estruturas subdesenvolvidas, nas quais a diferenciação do especificamente econômico muitas vezes se encontra em fase não muito avançada. Na análise que se segue, trataremos de captar o problema do subdesenvolvimento como uma realidade histórica, decorrente da propagação de técnica moderna do processo de constituição de uma economia de escala mundial (Furtado, 1966, p. 3).

Furtado identifica o desenvolvimento e o subdesenvolvimento como fenômenos interdependentes, que surgem no processo de evolução do capitalismo industrial (Boianovsky, 1987)[14]. No âmbito desse processo, os cepalinos destacam o papel do progresso técnico, concebendo o sistema centro-periferia, introduzido inicialmente por Prebisch (1949).

Os países centrais são aqueles em que se origina o progresso técnico e onde se concentra os frutos da crescente produtividade da economia decorrente deste. Nos centros, os métodos de produção se difundem brevemente entre os diversos setores da economia, e dada a ampliação da demanda que acompanha a elevação da produtividade, origina um ciclo virtuoso de inovações tecnológicas, diversificando a produção de bens e serviços. Como resultado, a estrutura produtiva dos países centrais é diversificada e homogênea, não havendo distinção nítida entre os setores exportadores e aqueles voltados para o mercado interno.

> *La índole centrípeta del capitalismo se manifiesta persistentemente en las relaciones entre los centros y la periferia. En los primeros se origina el progreso técnico y tiende a concentrarse en ellos el fruto de la creciente que acompaña al incremento de productividad se concentra también allí la industrialización, aguijada por incesantes innovaciones tecnológicas que diversifican más y más la producción de bienes y servicios* (Prebisch, 1981, p. 37).

Os países periféricos, por sua vez, são aqueles onde o progresso tecnológico penetra somente em setores exportadores de produtos primários ou setores cujas atividades estejam diretamente relacionadas à exportação, que constituem o setor dinâmico da economia

[13] O detalhamento do carácter estruturalista da escola cepalina é encontrado em Palma (1987) e Rodríguez (2009), entre outros. Sobre o método histórico-estruturalista na obra de Furtado, cf. Boianovsky (2017).
[14] "From de very beginning ECLAC's analysis was structuralist in the sense that it was associated with both a view of the world economy as a system within which the center and the periphery are intrinsically related to one another, and the most economic problems of the periphery [...] derive from the specific economic structure the emerged from that interaction" (Blankenbur, Palma & Tregenna, 1987, p. 71)

(Rodríguez, 2006). Tem-se ali a distinção entre setores focados na exportação e setores voltados ao mercado interno. Logo, nos países periféricos coexistem setores de alta produtividade com setores atrasados tecnologicamente, desenvolvendo-se, assim, uma estrutura produtiva especializada e heterogênea[15].

> *Heterogeneous because economic activities with remarkably different productivity-growth dynamics existed side by side – namely, a modern export sector coexisting with a backward agriculture and an undersized manufacturing sector. Over-specialized because the range of exports was limited to just a few (homogenous, unbranded and price-volatile) commodities, and their process of production had very limited backward and forward-linkages with the rest of the economy* (Palma, 1987, p. 573).

No manifesto, Prebisch (1949) também destacou que os argumentos favoráveis à divisão internacional do trabalho e ao livre comércio entre os países têm por base a hipótese de que o progresso técnico tende a difundir-se buscando beneficiar a todos. Tal difusão se daria conforme se segue: diante do progresso tecnológico, seria de se esperar que os preços dos bens manufaturados reduzissem mais do que o preço dos bens primários. Assim, os países periféricos se apropriariam do progresso técnico de modo semelhante aos países centrais. No entanto, isso não ocorria, culminando nos seguintes fatos estilizados identificados para as economias primário-exportadoras: a) menor crescimento da renda frente aos países industrializados; b) recorrentes problemas de balanço de pagamentos; c) tendência à deterioração dos termos de troca; e, d) desemprego persistente (Palma, 1987).

Prebisch e os demais autores da escola estruturalista não visualizavam a possibilidade de manter-se o desenvolvimento periférico com base na especialização primário-exportadora, sendo que a industrialização seria indispensável.

> Ela [a industrialização] não é um fim em si mesma, mas o único meio de que se dispõe para captar uma parte do fruto de progresso técnico e elevar progressivamente o nível de vida das massas (Prebisch, 1949, p. 48).

No intuito de explicar os fatos estilizados ora mencionados e outras características do processo desenvolvimento dos países latino-americanos, a escola estruturalista desenvolveu amplo arcabouço teórico no decorrer do século XX. Assim, faz-se importante debater sobre os aspectos gerais da escola, que perpassam as obras de diversos autores cepalinos, que tratam da especificidade do subdesenvolvimento latino-americano, da concepção centro-periferia e da necessidade de industrialização. E ainda, vale esclarecer que o presente estudo não tem por norte discorrer sobre as diversas teorias estruturalistas. Logo, nas próximas subseções tem-se análise de três delas, de modo a verificar se esses autores

[15] O conceito de hetoregeneidade estrutural foi concebido por Furtado (2009).

propunham políticas econômicas que se aproximam daquelas decorrentes dos regimes de crescimento *profit-led* e/ou *wage-led*.

### 3.1. A teoria da deterioração dos termos de troca[16]

Prebisch (1949) observa que os frutos do progresso técnico não eram apropriados pelos países periféricos, do mesmo modo que nos países centrais. Para tanto, aquele autor identifica dois motivos, a saber: 1) os preços das mercadorias nos países centrais não baixam diante do progresso técnico; e, 2) a relação de preços entre os produtos manufaturados e os produtos primários é desfavorável para os segundos.

A compreensão de tais motivos, segundo Prebisch (1949), é necessária para análise do ciclo econômico nos países centrais e na periferia[17].

Nos países centrais, durante a fase ascendente do ciclo econômico, os excessos de demanda por bens manufaturados tendem a elevar os preços e, consequentemente, os lucros e os salários (em geral, os lucros aumentam mais que os salários). Para se elevar a produção de bens manufaturados, eleva-se também a demanda por insumos, isto é, a demanda derivada de matérias primas. Nessa fase do ciclo, portanto, tem-se uma ampliação dos lucros e preços dos produtos originários dos países periféricos, de tal modo que se realiza "certa" transferência dos frutos do pregresso do centro para periferia.

Na fase descendente do ciclo, por sua vez, o excesso de oferta de bens finais força a redução dos preços e dos lucros e salários. No entanto, Prebisch (1949) destaca que nos países centrais predomina forte ação corporativa (sindical) que impede a excessiva redução das remunerações dos trabalhadores frente ao lucro. De modo oposto, nos países periféricos, dada a ausência dessa organização, diante da redução da demanda derivada e a consequente queda dos preços dos bens primários, os empresários logram transferir para os trabalhadores a redução das receitas.

Complementando a análise do ciclo, Prebisch (1964) destaca que a elasticidade da demanda por bens manufaturados é superior à dos bens primários, fazendo com que os preços dos bens manufaturados variem menos que os preços dos bens primários. Tais fatores evidenciam a nítida tendência à deterioração dos termos de troca para os países periféricos.

---

[16] A presente seção tem por base, principalmente, os trabalhos de Prebisch (1949, 1964) e consequentes interpretações.

[17] Rodríguez (2009) afirma que existem três versões da teoria da deterioração dos termos de troca, quais sejam: 1) Contábil; 2) Dos ciclos; e, 3) Industrial. No presente estudo interpreta-se que a versão dos ciclos incorpora em si as demais versões descritas por aquele autor.

Além disso, a diferença entre as elasticidades faz com que nos países centrais durante a fase ascendente, mesmo que a procura por determinado bem se sature, surjam novos produtos, reavivando a dinâmica da economia (Prebisch, 1964). Nos países periféricos, ao contrário, dado a baixa elasticidade, essa dinâmica não ocorre.

Assim, a teoria da deterioração dos termos de troca explica "simultaneamente as flutuações e as tendências a longo prazo de rendas e preços" (Rodriguez, 2009, p. 143), bem como o modo pelo qual o fruto do progresso técnico é apropriado no centro, e não na periferia.

> [na teoria da deterioração dos termos de troca] está a chave do fenômeno pelo qual os grandes centros industriais, não apenas retêm para si o fruto das inovações à sua própria economia, mas, ainda, estão em posição favorável para captar uma parte do que surge no progresso técnico da periferia (Prebisch, 1949, p. 59).

Da teoria em questão, Prebisch e os demais cepalinos observaram que a solução para a elevação da renda e a apropriação do progresso tecnológico pela periferia seria a industrialização, pois, a partir daí os países subdesenvolvidos passariam a produzir produtos de maior elasticidade renda da demanda.

Em resumo, no ciclo de Prebisch (1959,1964) é possível observar que a manutenção de elevado *wage share* na fase descendente do ciclo permite aos países centrais maior apropriação – do que os países periféricos – dos frutos do progresso tecnológico. Além disso, estimula nos países centrais a diversificação da produção, dada a elasticidade e renda superior à unidade para os produtos industrializados.

Logo, percebe-se que a teoria da deterioração dos termos de troca, apesar de não formalizar, sugere que a elevação da participação dos salários na economia atuaria em prol do crescimento – exatamente o proposto sob uma economia no regime de crescimento *wage-led*.

É possível que a remuneração dos trabalhadores nos países do centro e da periferia seja diferenciada em termos de nível de salário ao invés de participação na renda total. No entanto, na exposição do ciclo econômico identifica-se a importância dada a remuneração do trabalhador, o que advoga a economia sob o regime *wage-led*.

### 3.2. A tendência à estagnação[18]

A tese de que as economias latino-americanas tenderiam à estagnação foi apresentada por Furtado na obra intitulada *Subdesenvolvimento e estagnação na América Latina*, de 1966. Ali, aquele autor discorre sobre dois modelos, a saber: 1) referente à fase primário-exportadora; e, 2) referente à fase de industrialização por substituição de importações.

A primeira fase seria marcada pelas seguintes características: a) terra e oferta de mão de obra abundante[19]; b) baixo nível de salários; c) deterioração dos termos de troca; e, d) economia composta pelos seguintes setores: subsistência, exportador e provedor de capacidade produtiva para o setor exportador. Segundo Furtado (1966), no início do processo de desenvolvimento, os trabalhadores excedentes seriam absorvidos com produtividade marginal zero. No entanto, à medida que a demanda pelos bens exportados se elevasse, seria necessário ampliar o investimento no setor provedor de capacidade produtiva. A partir daí, a dúvida era se essa fase de desenvolvimento geraria os recursos necessários à ampliação da capacidade produtiva. A resposta aqui seria positiva, pois, os recursos provenientes da exportação gerariam a poupança necessária à ampliação dos investimentos – ponto relevante no presente estudo, pois evidencia a diferença fundamental entre o modelo teórico de Furtado e o modelo kaleckiano exposto na seção anterior, observando que em Furtado não é o investimento que determina a poupança[20]. De todo modo, quando Furtado problematiza o grau de utilização da capacidade produtiva no Brasil, sua análise se aproxima do arcabouço teórico de Kalecki-Steindl (Oliveira, 2019).

> [...] no modelo agroexportador, a própria expansão da atividade exportadora assegura a poupança necessária, uma vez que a produção [do terceiro setor], não podendo ser consumida ou exportada, tem como destino obrigatório a incorporação à capacidade produtiva (Coutinho, 2015, p.459).

Tem-se, portanto, que uma vez mantida as exportações de bens primários, a fase em questão resultaria em um ciclo virtuoso, pois se elevaria, ao mesmo tempo, a produtividade do capital e a taxa de poupança[21]. Mas quando do encerramento das exportações, haveria

---

[18] A presente subseção tem por base a obra intitulada *Subdesenvolvimento e estagnação na América Latina*, de Celso Furtado (1966).

[19] A oferta de mão de obra ilimitada nos países latino-americanos e caribenhos é analisada detalhadamente em Lewis (1958).

[20] Fato que não inviabiliza a análise proposta, pois, o que se deseja comparar são as propostas de política econômica subtendidas dos modelos estruturalistas frente àquelas propostas pelos diferentes regimes de crescimento identificados por Bhaduri e Marglin. Não se discute a estrutura causal dos diferentes modelos teóricos.

[21] "[...] um aspecto interessante do modelo agrícola multissetorial é a conclusão de que o aumento da concentração de renda não impede o crescimento econômico, uma vez que a composição da demanda necessariamente envolve investimentos [no setor provedor de capacidade produtiva ao setor exportador]" (Coutinho, 2015, p. 459).

excesso de oferta de bens primários no mercado, queda dos preços e redução dos investimentos. Logo, a segunda fase estaria em prática.

Ao discorrer sobre a segunda fase, Furtado (1966, p. 79) reconhece os argumentos descritos na subseção anterior, isto é, diante da queda das exportações e a tendência à deterioração dos termos de troca, o estrangulamento externo fez com que os países periféricos adotassem políticas restritivas que sustentaram a renda interna e impulsionaram o processo de industrialização por substituição de importações. Nesse ínterim, a manutenção da renda interna, além de criar o mercado para os bens manufaturados, elevou os preços destes.

Segundo aquele autor, a substituição de importações de bens de consumo não duráveis seria fácil, dado os menores preços dos bens e a existência de amplo mercado, mas tais fatores não estariam presentes na fase posterior de substituição de bens de consumo duráveis (Furtado, 1966, p. 87). Aqui vale destacar que diferentemente dos países centrais, onde o desenvolvimento tecnológico era o resultado endógeno das mudanças sociais, nos países periféricos, a técnica produtiva era fator exógeno introduzido em uma sociedade contendo marco social e institucional inadequado para sua plena absorção.

> Ao contrário dos países que se desenvolveram na fase clássica, durante a qual o avanço da técnica estava intimamente relacionado com os demais fatores causantes da aceleração do processo de desenvolvimento econômico e de mudança social, no atual processo de transformação das estruturas subdesenvolvidas a tecnologia constitui um fator exógeno de reduzida flexibilidade (Furtado, 1966, p. 9).

As técnicas de produção necessárias para a produção de bens intermediários eram intensivas em capital. Destarte, sua produção não resultava em absorção de grande contingente de trabalhadores. Logo, havia redução da massa de salários na economia, bem como a ampliação dos lucros, aumentando a concentração de renda. Em adendo, identificava-se redução do mercado consumidor tanto de bens primários quanto de bens manufaturados.

Diante da redução do mercado, para se estimular a produção interna dos bens de capital, os preços deste deveriam ser mais elevados do que os preços médios da economia. Sobre tal dinâmica, Furtado (1966) conclui que, como resultado, se daria a ampliação da relação capital-trabalho e redução da relação produto-capital na economia, acarretando na estagnação da economia.

> Na medida em que a demanda se inclina em favor de indústrias produtoras de bens de consumo duráveis ou de capital, privilegia setores que operam com uma

> relação produto-capital inferior à média da economia, fortalecendo a tendência à estagnação (Coutinho, 1980, p. 143).

Nos argumentos de Furtado (1966), é possível perceber que a dinâmica do processo de substituição de importações, ao invés de reduzir, alavanca a heterogeneidade estrutural, que se agrava na medida em que não apenas o setor de bens de capital se mecaniza, mas também o setor agrícola, reduzindo ainda mais sua capacidade de absorção de mão de obra. O resultado inevitável seria a estagnação.

> A queda na taxa de crescimento seria estimulada pelo declínio da relação produto-capital "tecnológica", inerente ao setor de bens de consumo duráveis e equipamentos (em condições de mercado restrito), e também pela perda de dinamismo da agricultura moderna, que reduz sua capacidade de absorção de renda (Coutinho, 2015, p. 464).

O processo de industrialização, na adoção de técnicas de capital intensivas, reduz a demanda por trabalhadores e, consequentemente, a massa salarial da economia, significando na redução do consumo total da economia (bens de consumo não duráveis e duráveis). Sobre a questão, Coutinho (2015) observa que a concentração de renda é um dos argumentos centrais da tese estagnacionista de Furtado; ou seja, a redução do mercado de consumo faz com que os bens de capital necessitem ser repassados com preços elevados, pois, do contrário, não seriam produzidos. Tais fatores atuavam para que houvesse a tendência à redução da relação produto-capital.

O fato de Furtado (1966) identificar à tendência a estagnação a partir da redução do mercado de consumo, ou seja, a partir da concentração de renda, permite inferir que sua análise se assemelha a concepção de economia sob o regime de crescimento *wage-led*.

Tal interpretação não é consensual. Oliveira (2019), por exemplo, afirma que o regime de crescimento subjacente em Furtado é *profit-led*, pois, a concentração de renda promoveria o crescimento, mas não o desenvolvimento. De fato, Oliveira (2019) interpreta em Furtado a possibilidade de ocorrência de crescimento sem desenvolvimento. Aqui vale salientar que tal discussão não é o foco do presente estudo, uma vez que se busca identificar a concepção de política econômica presente na tese do estagnacionismo e as decorrentes dos regimes de crescimento *wage-led* e *profit-led*.

É importante frisar que, para Furtado (1966), a tendência à estagnação é inerente ao processo de industrialização dos países latino-americanos, pois este adotava técnicas para um marco social e institucional inadequado. A alteração desse quadro envolvia modificar esse marco institucional em três direções, quais sejam: 1) evitar tecnologias que provoquem

concentração de renda; 2) ampliar as dimensões potenciais e atuais do mercado via integração econômica regional; e, 3) orientar o progresso tecnológico as necessidades da economia.

Nas direções sugeridas por Furtado (1966), novamente se percebe no seu modelo teórico a importância de políticas em prol da participação dos salários na renda – ação que se aproxima da concepção de regime de crescimento *wage-led*.

### 3.3. Crítica ao estagnacionismo

Tavares e Serra (1974), no importante ensaio intitulado *Além da Estagnação*, de 1971, afirmam que a relação produto-capital não explica a dinâmica da acumulação capitalista, sendo o resultado desta. Para aqueles autores, a dinâmica capitalista é explicada pelo investimento, que depende primordialmente do lucro esperado e não da relação capital-produto; ou seja, é o investimento que determina a poupança, bem como no modelo kaleckiano.

A supramencionada relação inversa entre as razões capital-trabalho e produto-capital de Furtado (1966) somente ocorreria se a taxa de lucro de todos os setores da economia fosse igual – pressuposto por demais irrealista para Tavares e Serra (1974).

> Furtada parte de um suposto quanto à igualização das taxas de lucro que nos parece irreal, visto que em condições de mercado acentuadamente imperfeito, com alguns ramos dominados por grandes unidades de produção que além disso possuem forte grau de monopólio tecnológico, não há por que admitir que se igualem a taxa de lucro das diferentes indústrias (Tavares & Serra; 1974, p. 163).

Segundo Tavares e Serra (1974), Furtado não levou em consideração o papel do progresso tecnológico. Por exemplo, se o progresso fosse poupador de capital, na medida em que a economia se industrializasse, a relação capital-trabalho não cresceria a ponto de reduzir a relação produto-capital. Por outro lado, se o progresso tecnológico fosse poupador de trabalho, a relação produto-capital somente se reduziria caso o aumento relativo da produtividade do trabalho fosse inferior ao aumento relativo da relação capital-trabalho.

> [...] trabalhar com "categorias resultado", na consideração das taxas de lucro das diferentes indústrias que tenderiam a igualar-se do mesmo modo que os salários, ao superar a intensificação do uso do capital da penetração do progresso técnico e, além disso, não considerar os efeitos destes sobre a produtividade dos investimentos nem os efeitos das diversas modalidades de economias externas, Furtado parece ter vestido a "camisa de força" de um modelo neoclássico de equilíbrio geral – elegante mas ineficaz para explicar a dinâmica de uma economia capitalista (Tavares & Serra, 1974, p. 167).

É preciso salientar que a afirmação de que Furtado (1966) não considerou os efeitos do progresso tecnológico não é verídica, pois, ele analisou o caso em que o progresso é neutro, isto é, eleva tanto a produtividade do capital quanto do trabalho de forma igual

(Furtado, 1966, p. 86). Nessa situação, dado que normalmente a inovação ocorre no setor de manufaturas, haveria redução dos preços desses bens, beneficiando os consumidores. Assim, a redução dos preços dos bens manufaturados não resultaria em elevação da massa de salários reais da economia, porque são bens com pequena participação na cesta de consumo do montante total de trabalhadores, e o progresso tecnológico não reduziria, mas sim, agravaria a heterogeneidade estrutural das economias periféricas.

É fato que Furtado (1966) não considerou os pontos levantados por Tavares e Serra (1974) decorrentes dos progressos capitais intensivos ou trabalho intensivo. Grosso modo, em prol do objetivo do presente estudo, vale destacar a concepção diversa da política econômica a ser adotada em prol do crescimento nas obras supramencionadas. Assim, enquanto a análise de Furtado remete a economia sobre o regime de crescimento *wage-led*, para Tavares e Serra, a economia seria *profit-led*.

Ou seja, o processo de substituição de importações não tenderia à estagnação observada a redução da massa de salários na economia; ao contrário, a economia continuaria crescendo devido à elevação da participação dos lucros. E ainda, enquanto para Furtado a concentração de renda era o problema, em Tavares e Serra, esta era fundamental para a manutenção do crescimento, pois estimulava o consumo e o investimento em bens de alto valor agregado.

A interpretação ora apresentada não significa que Tavares e Serra (1974) identificassem a concentração de renda como um resultado benéfico para a sociedade. O foco da análise para a compreensão do processo de acumulação de capital era o investimento. Segundo aqueles autores, o capitalismo latino-americano e o brasileiro, em particular, apresentavam sérios problemas, pois, ao mesmo tempo em que eram excludentes, enfrentavam escassez de oportunidade de investimento – algo diretamente relacionado à heterogeneidade estrutural dessas economias.

Tavares e Serra (1974) também discutem se haveria possibilidade de homogeneização produtiva na América Latina. Tal fato ocorreria, caso houvesse investimentos nos setores não modernos, de modo a elevar a produtividade destes. Entretanto, os investimentos não ocorreriam, mas sim, seriam direcionados para os setores que possuem elevadas taxas de lucro (os setores modernos). Logo, a heterogeneidade tenderia a se acentuar.

> [...] é possível concluir que a modernização e a intensificação do capital tendem, efetivamente, a processar-se, em cada etapa de expansão, de modo restrito a algumas áreas e subsetores. Com isso, enquanto ampliam-se os estratos

> modernos, aprofunda-se, necessariamente, a heterogeneidade estrutural (Tavares & Serra; 1974, p. 188).
>
> No caso do Brasil, o que interessa não é tanto a concentração da propriedade e da produção, mas sim os mecanismos de controle dos setores dinâmicos e o problema da limitada participação das massas incorporadas ao processo de expansão (Tavares & Serra; 1974, p. 199).

Novamente, é perceptível na argumentação de Tavares e Serra (1974) a respeito da manutenção da heterogeneidade estrutural que a análise se remete a uma economia com regime de crescimento *profit-led*.

## 4. Conclusão

No presente estudo expõe-se o modelo kaleckiano de crescimento e distribuição, em especial, a versão proposta por Bhaduri e Marglin (1995). Aqui, a dinâmica econômica é determinada pelo investimento que, consequentemente, é a variável-chave da economia. Os principais pressupostos do modelo são: economia composta por trabalhadores e capitalistas; as empresas são verticalmente integradas; o governo e o mercado externo são negligenciados; o mercado interno é imperfeito; os preços são determinados por *mark up* nos custos; os trabalhadores não poupam; e, a produtividade do trabalho e capital é dada e constante (não se tem retornos marginais decrescentes).

No modelo em questão, o investimento é endogenamente determinado, dependendo do *animal spirit*, do lucro e da taxa de utilização da capacidade da economia. E diferente da modelagem tradicional, aqueles autores não fazem uso da taxa de lucro, mas sim, da participação dos lucros no produto (*profit share*) como determinante do investimento. A partir disso, eles obtêm que com base nos valores dos parâmetros, é possível predominar um regime de crescimento advindo dos salários (*wage-led*) ou da participação dos lucros no produto (*profit-led*) – modelo que permitiu explicar por que a partir dos anos 1970, os países desenvolvidos tinham menor crescimento, observado o *profit squeeze*.

Apesar de Bhaduri e Marglin (1990) apresentarem a conceituação dos diferentes regimes de crescimento na década de 1990, a presente pesquisa evidenciou que as concepções de regime de crescimento provenientes desse modelo também se identificam nas teses estruturalistas, discorrendo-se, em particular, três delas: 1) A tendência à deterioração dos termos de troca; 2) A tese da estagnação; e, 3) A crítica à tese da estagnação.

Após a introdução de algumas especificidades da escola estruturalista latino-americana, como, por exemplo, o conceito de subdesenvolvimento, a concepção centro-periferia e a necessidade de industrialização para superação do subdesenvolvimento,

discutiram-se detalhadamente as três teses supramencionadas. Assim, na primeira, para identificar a tendência a deterioração dos termos de troca, Prebisch remete-se a uma economia sob o regime de crescimento wage-led. Na segunda tese, são as alterações no *wage share* que permeiam os argumentos utilizados por Furtado (1966) para justificar a tendência à estagnação no processo de industrialização por substituição de importação, uma vez que este adotava técnicas intensivas em capital – a consequente diminuição da massa salarial resultaria na redução do mercado de consumo (ampliando a concentração de renda); ou seja, para que houvesse substituição no mercado de bens intermediários, diante da reduzida escala do mercado, os preços desses bens tendiam ser elevados – fatores que resultavam na redução da relação produto-capital e, consequentemente, em estagnação. E na terceira tese predomina a concepção do regime de crescimento profit-led, segundo Tavares e Serra (1974), as economias latino-americanas não tendiam à estagnação, pois na dinâmica do processo de substituição de importações, a constituição da indústria de bens de capital exigia a concentração de renda – os bens desse setor são de alto valor agregado (consumidos por pequena parcela da população) e exigem alto montante de investimento, ao passo que o crescimento se daria devido à concentração de renda. Em suma, o presente evidenciou que a concepção de regimes de crescimento *wage-led* e *profit-led* se faziam presentes nas teses estruturalistas.

## Referências


Bhaduri, A. & Marglin, S. (1990), Unemployment and the real wage: the economic basis for contesting political ideologies. *Cambridge Journal of Economics*, 14(4):375-393. DOI: https://dx.doi.org/10.1093/oxfordjournals.cje.a035141

Bhaduri, A. & Marglin, S. (1995), *Profit Squeeze and Keynesian Theory*. In The Golden Age of Capitalism – Reinterpreting the Postwar Experience. Clarendon Press, Oxford.

Blankenburg, S., Palma, J.G. & Tregena, F. (1987), *Structuralism*. In the New Palgrave: a dictionary of economics. London, Macmillan.

Boianovsky, M. (1987), *Celso Furtado*. In the New Palgrave: a dictionary of economics. London, Macmillan.

Boianovsky, M. (2017), Beyond capital fundamentalism: Harrod, Domar and the history of development economics. *Cambridge Journal of Economics*, 42 (2): 477–504. DOI: https://doi.org/10.1093/cje/bex030.

Ciccone, R. (1986), Accumulation and Capacity Utilization: Some Critical Considerations on Joan Robinson's Theory of Distribution. *Political Economy: Studies in the Surplus Approach*, 2 (1): 17-36.

Coutinho, M. C. (1980), Distribuição de renda e padrões de consumo: alguns autores em torno da tradição cepalina. *Ensaios FEE*, 1 (1): 14.

Coutinho, M. C. (2015), Subdesenvolvimento e estagnação na América Latina, de Celso Furtado. Revista de Economia Contemporânea, 19 (3): 448-474. DOI: https://doi.org/10.1590/198055271935

Dutt, A. (1984), Stagnation, income distribution, and monopoly power. *Cambridge Journal of Economics*, 8 (1): 25-40. DOI: https://doi.org/10.1093/oxfordjournals.cje.a035533.

Dutt, A. (1990), *Growth, Distribution and Uneven Development*. Cambridge University Press, Cambridge.

Furtado, C. (1966), Subdesenvolvimento e Estagnação na América Latina. Rio de Janeiro: Civilização Brasileira.

Furtado, C. (2009), *Desenvolvimento e Subdesenvolvimento*. Rio de Janeiro: Contraponto. Centro Internacional Celso Furtado.

Hein, E. (2008), *Money, Distribution Conflict and Capital Acumulation: Contributions to Monetary Analysis*. New York: Palgrave Macmillan.

Hein, E. (2014), *Distribution and Growth after Keynes: A Post-Keynesian Guide*. Edward Elgar.

Kaldor, N. (1957), A model of economic growth. *Economic Journal*, 67: 591-624. DOI: https://doi.org/10.2307/2227704.

Kalecki, M. (1951), Report on the main current economic problems. J. Osiatynsky, ed. *Collected Works of Michal Kalecki*, Vol. V. Oxford University Press, 1993.

Kalecki, M. (1954), The problem of financing economic development. J. Osiatynsky, ed. *Collected Works of Michal Kalecki*, Vol. V. Oxford University Press, 1993.

Kalecki, M. (1983), *Teoria da Dinâmica Econômica: Ensaio sobre as mudanças cíclicas e a longo prazo da economia capitalista*. São Paulo: Abril S.A.

Lavoie, M. (1992), *Foundations of Post-Keynesian Economic Analysis*. New Directions in Modern Economics, Edward Elgar Publishing Limited.

Lavoie, M. (2014), *Post-Keynesian Economics: new foundations*. Edward Elgar Publishing Limited.

Lavoie, M. (2017), The origins and evolution of the debate on wage-led and profit-led regimes. *European Journal of Economic Policies: Intervention*.14 (2), 200-221. DOI: https://doi.org/10.4337/ejeep.2017.02.04.

Lavoie, M & Stockhammer, E. (2013), Wage-led Growth: Concept, Theories and Policies. International Labour Office – Geneva.

Lee, F. (1999), *Post Keynesian Price Theory*. Cambridge University Press.

Lewis, A. (1958), Economic development with unlimited supplies of labour. In Agarwala & Singh. *The economics of underdevelopment*.

Lopes, J & Assous, M. (2010), *Michal Kalecki*. Great Thinkers in Economics, series editor: A.P. Thirlwall.

Oliveira, A. (2019), *Uma Análise do (Sub)Desenvolvimento Brasileiro: Um Modelo de Crescimento com Distribuição de Renda de Regime "Profit-Led"*. Tese de Doutoramento na UFU.

Palma, J.G. (1987), *Raul Prebisch*. In the New Palgrave: a dictionary of economics. London, Macmillan.

Pasinetti, L. (1962), Rate of profit and income distribution in relation to rate of economic growth. *Review of Economic Studies*, 29: 267-279. DOI: https://doi.org/10.2307/2296303.

Possas, M & Baltar, P. (1981), Demanda efetiva e dinâmica em Kalecki. *Pesquisa e Planejamento Econômico*, 11 (1), RJ. DOI: https://repositorio.ipea.gov.br/handle/11058/6460.

Prebisch, R. (1949), *O desenvolvimento econômico na America Latina e algum de seus principais problemas*. Cepal.

Prebisch, R. (1964), *Dinâmica do Desenvolvimento Latino Americano*. Ed. Fundo de Cultura Económica, México.

Prebisch, R. (1981), *Capitalismo Periférico, crisis y transformación*. Ed. Fundo de Cultura Económica, México.

Robinson, J. (1956), *Acumulação de Capital*. Ed. Abril, Coleção os Economistas, São Paulo.

Robinson, J. (1962), *Essays in the theory of economic growth*. London: Macmillan.

Rodríguez, O. (2006), *O Estruturalismo Latino-Americano*. Ed. Civilização Brasileira, Rio de Janeiro.

Rowthorn R. E. (1981), Demand, real wages and economic growth. *Thames Papers in Political Economy*, autumn: 1-39.

Rugitsky, F. (no prelo), *Inequality, consumption patterns, and productive structure a Latin American contribution to Kaleckian models.*

Rugitsky, F. (2016), Growth, distribution, and sectoral heterogeneity: Reading the Kaleckians in Latin America. EconomiA, 17 (3): 265-278. DOI: https://doi.org/10.1016/j.econ.2016.09.005.

Steindl, J. (1952), *Maturity and Stagnation in American Capitalism*. New York: Monthly Review Press.

Steindl, J. (1979), Stagnation theory and stagnation policy. *Cambridge Journal of Economics*, 3 (1): 1-14. DOI: https://doi.org/10.1093/oxfordjournals.cje.a035405.

Tavares, M (1974), *Da substituição de Importação ao capitalismo financeiro – Ensaios sobre economia brasileira*. Rio de Janeiro, Ed. Zahar.

Tavares, M. & Serra, J. (1971/1976), *Além da estagnação*. In: Tavares, M. Da substituição de Importações ao Capitalismo Financeiro: ensaios sobre economia brasileira. Rio de Janeiro, ed. Zahar: 155-207.

Taylor, L. (1985), A stagnationist model of economic growth. *Cambridge Journal of Economics*, 9 (4): 381-403. DOI: https://doi.org/10.1093/oxfordjournals.cje.a035588.

# A LIFE-CYCLE INTERGENERATIONAL MODEL CONSIDERING SOCIAL SECURITY*

*Um Modelo de Ciclo de Vida Intergeracional Considerando Seguridade Social*

**Beatriz Estulano Vieira†**

**João Gabriel de Araujo Oliveira‡**

**Renato Nozaki Sugahara§**

## Abstract

The central objective of this paper is to deliver an intergenerational Life Cycle model considering the retirement process based on the pay-as-you-go system (PAYG). Our model is inspired by Baranzinis' approach, where the optimal consumption analysis is made in a two-class type and restricted by the capital variation of each one. Our main results observe the equilibrium solution of the consumption and capital stock to both classes and conclude that the PAYG system does interfere with the results, as well as the time preference to leave or not inheritance. The methodology approached here is the Pontryagins' Maximum Principle. We also applied a numerical simulation to ensure the robustness of our approach.

**Keywords:** Capital Accumulation; Life Cycle; PAYG; Retirement.
**JEL Code:** J26; D15; C61.

## Resumo

O objetivo central deste trabalho é desenvolver um modelo de ciclo de vidas intergeracional, considerando aposentadorias baseadas no sistema pay-as-you-go (PAYG). Nosso modelo é inspirado no de Baranzini, que apresenta a análise do consumo ótimo em um sistema de duas classes e restrito a variação do capital em cada uma. Nossos principais resultados observam a solução ótima de equilíbrio do consumo e estoque de capital para ambas as classes, concluindo que o sistema PAYG interfere nos resultados, assim como, a taxa de preferência no tempo por deixar ou não herança. A metodologia utilizada aqui é a do Princípio do Máximo de Pontryage. Também foi aplicada uma simulação numérica para garantir a robustes do modelo.

**Palavra-chave:** Acumulação de Capital; Ciclo de Vida; PAYG, Aposentadoria.

**Códigos JEL**: J26; D15; C61.

* The first and second authors thank the National Council for Scientific and Technological Development (CNPQ) and Coordination of Superior Level Staff Improvement (CAPES) respectively, for the financial support. We are grateful for the comments and suggestions made by Joanna Alexopoulos, Ricardo Araujo, Nelson Barbosa, the participants of the XXIV ANPEC South Meeting, the Editor of BKR, and the anonymous referees. Obviously, they bear no responsibility for either errors or opinions presented here.
† PhD Candidate in Economics, University of Brasilia, Brasilia-DF. Contact: b.est.vieira@gmail.com.
‡ PhD Candidate in Economics, University of Brasilia, Brasilia-DF. Assistant Professor of Economics, UAECSA, Federal University of Goias, Goiás-GO. Contact: joaogabrielaraujooliveira@gmail.com.
§ Adjunct Professor of Economics, UEL, State University of Londrina. Contact: sugahara@uel.br.

## 1. Introduction

> "Since the end of the nineteenth century significant progress towards the removal of very great disparities of wealth and income has been achieved through the instrument of direct taxation— income tax and surtax and death duties— especially in Great Britain."
>
> The General Theory, Keynes (1936, p.372)

The central objective of this paper is to develop an alternative approach to the Intergenerational Life Cycle model considering social security, inspired by the "pay as you go" system (PAYG). We deal with a theoretical analysis concerning when the retirement system guarantees class mobility, and if economic growth and wealth distribution are impacted by it. Here, we consider Baranzinis' model (1991, CH. 6), which deals with heterogeneous agents in a life cycle model and inheritance, which characterize his approach closer to the Keynesian line of thinking[1]. The subject of social security has become one of the main topics of economic and political discussion in recent years both in developed and uneven economies. According to Portella and de Souza (2021) instead of privatizing the Social Security system, it is necessary to solidify the one sustained by the government and its financing, to guarantee the principle of human dignity.

The principles of the Life Cycle theory were presented in the early 1950s by Modigliani and Brumberg (1954). They assume that individuals plan their behaviour of the level of consumption and savings, throughout their life cycle. The authors' objective was to explain the consumption patterns of individuals. Agents' savings decisions must consider the consumption and savings choices considering the total income during life and their retirement at some point, so individuals' consumption decisions impact aggregate production at the macroeconomic level. In response to the traditional approach, Balestra and Baranzini (1971) worked in a two-class growth model considering a heterogeneous agent. They raise some income distribution hypotheses, and their result shows, that in equilibrium, the rate of profit is equal to the natural rate of growth divided by the capitalists' propensity to save, which is the well-known "Cambridge Equation" developed by Pasinetti (1962).

Moving forward, Baranzini (1991) presented a theory of wealth distribution, considering life cycle and inheritance. His model established microeconomic foundations for the theory of growth and wealth distribution based on the post-Keynesian framework. Nell (2013) describes micro-foundations, as an optimization system considering the consumption

[1] For more information about the microfundations of Baranzini's model and the post-Keynesian perspective, see the "The Oxford Handbook of Post-Keynesian Economics Volume 1" in the Chapter named: "The Cambridge post-Keynesian School of Income and Wealth Distribution".

agents and rationality principles. For him, individuals plan their economic behaviour during their Life Cycle, as well as reconcile simultaneously their individual intergenerational decisions. According to Wolff (1988), the specification of a Life Cycle savings model with a two-class seems to be consistent with the Pasinettis' result regarding the rate of interest and productivity growth in steady-state equilibrium. Besides, in a steady-state, wealth inequality among individuals appears to remain constant over time. Such conclusions come to reinforce the validity of the introduction of the microeconomic foundations into the two-class fixed savings model.

Therefore, the model and their extensions [like Teixeira, Sugahara and Baranzini (2002); Baranzini, Bejuino and Teixeira (2003); Wei and Araujo (2009); Sugahara, Aragón, da Cunha, Perdigão (2016); and Góes and Teixeira (2022)] does not deal with the social security system, which interferes in the dynamic of the model, since the consumption of the retired persons is composed by the social security. In this vein, we decided to introduce the PAYG system in a balanced government budget, where the public revenue is used as income transfer from capitalists and younger workers to the retired workers' consumption. A similar approach was presented by Heijdra (2002) and Acemoglu (2009) where the workers and capitalists income tax support the pension of the retiree, so there is a transfer of resources from young people to the elderly in each period. Therefore, the income transfer mechanism (considering government activities), adjusts the amounts received and transferred without losing resources between actively workers and the retired. Hence, this is a system that shows a solution that suits the characteristics of the Life Cycle because it dealt with intertemporal activities.

Our extension is based on the two-micro models' section treated in chapter 6 of Baranzinis' (1991) book and Góes and Teixeira (2022) where only capitalists are transmitting their wealth to their descendants, while workers accumulate only Life Cycle savings. These authors and we deal with the assumption that each individual makes his plans in order to maximize the value of the flow of discounted utilities from consumption, throughout his life expectancy. Besides, like them, we also deal with a continuous-time system.

For us, like Steedman (1972), the government agent uses taxation mechanisms to transfer income to the most vulnerable class (the workers), but in our case, is only to the retired workers. The taxation here will be direct on income as a mechanism for social security deducted from management, working as income transfer mechanisms. In our model, capitalists do not work and live off the consumption of the capital's income, then they do

not retire. On the workers' side, we have that their taxation is only for future consumption in the retirement period. The redistribution of wealth is essential to the theory, first because wealth is a stock, and second because it is directly connected to economic growth. Keynes (1936, p. 372) affirmed that through direct taxation the state has achieved a lower concentration of disposable income and wealth. In this vein, we consider direct taxation on income, absorbed by the government agent, which will only transfer from one to another, and the public sector will not operate with deficits or surpluses.

This article will be divided into 7 sections: the first one is this introduction which presents the objectives and the justification of our new approach. The second one shows a historical overview of social security in theoretical models. After that, we present the principles and extensions of the Life Cycle approach. The fourth part introduces the settings of our model, presenting the structure and proposes. Section five presents the maximization, results, and comparative analysis. Section six presents the numerical simulation. Finally, section six presents the concluding remarks.

## 2. A Historical Overview of Social Security Modelling

With Harrods' (1948) discussion of "hump saving", the hypothesis that savings would be highest in the middle-age of a person's life as they saved for retirement, started to recognize the importance of saving during working years for consumption during retirement. According to Feldstein (1976), the process of Life Cycle saving has been radically altered by the growth of public programs of social security retirement benefits, moving forward, in 1978, the same author discusses how private pension programs differ from public social security.

Following Feldstein (1978), while public social security programs act as a substitute for family retirement savings, the private pension contributions made by an employer are a deductible business expense, and when the benefits are paid, they are considered taxable income for employees. Although such public social security programs are likely to reduce national savings, this tendency is offset by private pension programs. The private pensions could in principle decrease aggregate savings, if covered employees increase their consumption in the first period, more than in the comparison of the sum of pension-funded accumulation and the induced extra saving of shareholders. However, the growth of private pensions has not harmed savings. Indeed, it will have an increase in savings from a small

amount caused by the combination of companies' partial funding, and the shareholders' response to unfunded liabilities.

Nevertheless, according to Gertler (1999), social security has positive results on capital intensity, such as real interest rates and labour supply. One implication is that social security will positively influence aggregate consumption, savings, and income distribution. However, there are two adjustments to a worker's wealth. The first one is when wealth includes the value of social security payments is equal to the one that workers can expect when he/she retires. The second is when the measure of human wealth is now net of a discounted tax stream. Although the increase in social security increases the capital stock, it has a strong negative wealth effect on the labour supply of retirees.

In the Brazilian case, the social security system is based on the parametric model, leading us to believe that this kind of system is not reliable for the near future. According to Holland and Malaga (2018), this system has a solidarity pillar between generations, thus, contributions financed by active young workers benefit the pensioners. This system is the parametric model and has been shown unsustainable thanks to population projections and changes in the labour market. Making it impossible to raise public incentives and reducing benefits for most Brazilians, turning the system inadequate. As a solution, the authors propose the adoption of a hybrid model, combining the advantages of the current repartition schemes with the capitalization regimen.

The first scheme is the PAYG method, which is used by the government as a theoretical model to guarantee social security. Here, the tax receipts are paid out as concurrent benefits and are not accumulated, when the current generation of workers retire, the benefits will depend on the tax payments of those who are active. Already, in the second scheme, each worker saves resources, which are saved in an individual self-account, which allows diversifying the individual risk among members of the same generation, this system has been in force in Chile since the 1981 reform. Thus, for Holland and Malaga (2018) the ideal structure would be to combine benefits paid by the government (universal) with a relatively low ceiling in distribution format, and more individual (private) contributions.

Following another line of thought, Miller (2020) states that none of the problems caused by public pensions is irreversible, public social security usually operates on a PAYG system. For him, the adoption of private pensions would not be a good alternative, since they are not redistributive, and do not guarantee lifetime benefits. Instead, it would increase

inequality among seniors and would be less effective at reducing poverty than social security, therefore, it would not be a viable solution.

The goal is to narrow public services expenditure gaps by making ethical profits new markets based on collecting and trading debts are emerging. It is stated by Lavinas (2018) that financialization is making not only the poor increasingly dependent on credit and loans but also the middle classes. No more welfare states, but rather 'debt fare states', given that instead of consumer credit to buy commodities or services, people will consume debt. Being indebted and living in debt may become the norm, notably in times of neoliberal austerity policies, when the government seeks to cut spending.

Dreze and Khera (2017) analyse the case of India and conclude that the expansion of social security programs, together with the broader recognition of economic and social rights, have made an important contribution to human well-being. Therefore, Ellery Junior and Bugarin (2003) proved empirically that the social security system, PAYG, will contribute to the improvement of well-being, which presents a welfare gain compared to a fully saving-funded system.

In our model, we deal with an overlapping generation model that is useful for analysing social security [see Gertler (1999)]. In these models, individuals live two periods, one when they are young and active, and another when they are already inactive. In addition, we assume the existence of two classes, because, according to Balestra and Baranzini (1971), the ideal implications of a model with heterogeneous agents concerning the economy present conveniently synthesized results. These results are valid when you have a system that presents the balanced profit rate with balanced growth equal to the natural growth rate divided by the capitalists' propensity to save, known as the "Cambridge Equation" (Pasinetti, 1962). Second, the equilibrium profit-share, which shows how income is distributed, is also independent of the workers' propensity to save. Again, the worker's saving behaviour is irrelevant for determining results, that is, they are not strong enough to impact the system.

Retirement behaves as a PAYG system, and takes place during the life cycle, which is done by the government. The government must intervene in order to avoid situations that would become socially unbearable, as stated by Pasinetti (2012), either through government spending or through the redistribution of income. Here, this redistribution will be done via imposter charges, for the most vulnerable class, the workers, as well as in Steedman (1972). Foley and Michal (1999, p. 225) say: "Government taxes and transfers can have effects on

the allocation of resources if the taxes and transfers are linked to economic decision variables like saving or profit". In the next section, we show a historical overview of the cycle theory.

## 3. Principles of the cycle theory and extensions

In the early 1950s, Franco Modigliani, among others, developed a theory assuming that individuals plan their behaviour of the level of consumption and savings, throughout their Life Cycle. Following this line, Baranzini (1991) developed a theory of wealth distribution, considering intergenerational theory and reason for inheritance. His model establishes microeconomic foundations for the theory of growth and distribution based on the post-Keynesian framework. According to Blecker and Setterfield (2019, p. 9), in post-Keynesian models, growth is fundamentally a demand-led process, as in Baranzinis' (1991) model. In this way, even the seemingly supply-determined limits to economic activity at any point in time are, in fact, likely to be influenced by the demand side of the economy. Baranzinis' objective would be to justify a better allocation of resources and economic growth. Thus, it is possible to optimize the utility of the agents and verify their behaviour over the period. In his model, the economy is divided between capitalists and workers, where the first-class receives profits and inheritance, while the second receives salaries. Several extensions of his approach were proposed.

Teixeira, Sugahara and Baranzini (2002) introduced government activities to the model, considering inheritance tax only. In their paper, they have shown how government transfers may be supported by orthodox micro-foundations. They expanded Baranzini (1991) in a discrete-time model dealing with capital accumulation, income distribution and inter-generational bequests. They analysed an approach only considering two periods, and in their case, there only exists taxation on inheritance. In the work, they conclude that the inclusion of the transfers' assumption is relatively negative to the capitalists' share in the total capital stock. Therefore, the Life Cycle hypothesis and bequest motive are compatible with basic governmental activities within a post-Keynesian framework. Baranzini, Benjuino, and Teixeira (2003) including taxation on capitalists' intergenerational bequests, also assume that such levy is fully transferred to the workers, who do not leave bequests to their descendants. Within this work, it is possible to show that total capital, as well as total savings, will expand. The later paper obtains these results in a continuous-time model.

Wei and Araujo (2009) provided an analysis of the optimal taxation to capitalists and workers in the Baranzinis' approach, intending to understand the public finances behaviour.

Their analysis spread the leisure and activity of the workers class, intending to verify in which situation they will choose to do work or not. Another accomplishment made by them is that, in the long run, the capital taxation tends to be zero, and in this case, the model is led to verify the equalization between profit rate and intertemporal preference tax. According to them, the workers can supply more or fewer jobs depending on the wages tax rate. In conclusion, their analysis shows that worker's taxation does not influence capital accumulation.

Sugahara, Aragón, da Cunha, Perdigão (2016) pursued to conceive orthodox micro-foundations to the macroeconomic model with the government. For this purpose, they used the overlapping generations with heterogeneous agents and the government model to allow both classes (capitalist and worker) to keep a positive intergenerational stock. Besides, they incorporated representative agents in heterogeneous classes. The main result of their work was the taxation effects on wealth distribution between classes. They also conclude a positive effect on the interest rates since the government presence increases the participation of the working class in the total capital stock of the economy. It is worth noting whether the provision of workers class in leaving an inheritance to their descendants is very high, they can disappearance with the capitalist class, leading to the euthanasia of the capitalist.

Another extension was designed by Góes and Teixeira (2022) when they show an alternative approach to the Baranzini (1991) model, presented for the continuous-time case. This paper is allowed technical progress and introduced behavioural differences between renters and workers. It is not only from the point of view of their initial endowments since in their case both classes can leave and receive the inheritance, depending on their preferences. They concluded that it has a possibility for workers to leave an inheritance and, in this case, does not change their functional distribution of income. However, it does change their consumption and capital stock (evidence of their bequest motive), expanding the growth of the economy. Therefore, this theory did not consider how the social security system can impact the system's results, which is one of our objectives.

## 4. Settings of the Model[2]

As stated in the introduction, the distinctive feature of the present model is the assumption of a differentiated interest rate. According to Balestra and Baranzini (1971),

[2] The Notations are in Appendix 1.

several reasons may be adduced in support of this assumption; first, historically, the interest rate has been considerably lower than the average profit rate; second, one can argue that the act of saving and the act of investing are two distinct operations; third, there is a risk factor associated with the investment, this risk should be reflected in the profit rate; fourth, it may be said that investment, to be profitable, must be carried out in a certain minimum quantity, the workers, taken individually, are not able to exploit the profit opportunities of big investment. Besides that, we shall assume a well-behaved neoclassical production function $Y = f(K, L)$, with constant returns to scale and possesses positive first-order partial derivatives and negative second-order direct partial derivatives.

A key feature of the neoclassical growth model is that they admit a representative household for the analysis of capital accumulation. Moreover, allow us to establish the equivalence between equilibrium and optimization growth problems. However, this assumption is not appropriate as the population grows, which the case is presented here. This occurs because, in particular, decisions made by the younger generation will affect the elderly. These economic interactions have no counterpart in the neoclassical growth model. Acemoglu (2009) affirms that these models are useful for several reasons. First, they capture the potential interaction of different generations of individuals in the marketplace. Second, they provide a tractable alternative to the infinite-horizon representative agent models. Third, some of their key implications are different from those based on the neoclassical growth model, as well as the dynamics of capital accumulation and consumption. The simplest way to relax the representative households' assumption is accomplished by the introduction of two-period lives.

To obtain explicit analytical solutions, we consider a two-period model, based on the Baranzini (1991, CH 6) approach. Individuals are fully trained adults at $t = 0$ when they start earning income, their activity period is for $R$ years and then they retire. Each one dies at age $T$, so enjoying $T - R$ years of retirement. This allows us to observe the effects of the various parameters like the savings rates, taxation, and capital accumulation in a more generalized Life Cycle model of income and wealth distribution. For both individuals the criterion of choice maximizes the value of the discount utilities, as individuals seek to maximize their consumption, these are:

$$U_C = \int_0^T e^{-\delta_C t} U_C[c_C(t)]dt = \int_0^T e^{-\delta_C t} \frac{1}{a}[c_C(t)]^a dt \quad (1)$$

$$U_W^A = \int_0^R e^{-\delta w t} U_W^A\left[c_W^A(t)\right]dt = \int_0^R e^{-\delta w t}\frac{1}{a}\left[c_W^A(t)\right]^a dt \quad (2)$$

$$U_W^R = \int_R^T e^{\eta t} U_W^R\left[c_W^R(t)\right]dt = \int_R^T e^{(1+\eta)t}\frac{1}{a}\left[c_W^R(t)\right]^a dt \quad (3)$$

Like in Baranzini (1991, p. 158) we are using the CRRA utility function. Equation (1) and (2) shows the general utility functions of the capitalist and activity workers, which are negatively affected by the intertemporal pure-time preference of each class. Equation (3) is the utility of the retired workers and, since these workers does not leave inheritance, they are not impacted by the intertemporal pure-time preference. Therefore, since the PAYG represents the income transfer from capitalists and activities workers to the retired workers, the population growth rate affects the level of their consumption. Each class has their consumptions rates and are defined as:

$$c_c(t) = c_c(0)e^{g^*_{c_c}t} = k_0\left(r - g^*_{c_c}\right)\frac{1 - e^{R(n-r)}}{1 - e^{T(g^*-r)}}e^{g^*_{c_c}t} \quad (4)$$

$$c_w^A(t) = c_w^A(0)e^{g_{c_W^A}t} \quad (5)$$

$$c_W^R(t) = c_w^R(R)e^{g_{c_W^R}t} \quad (6)$$

where: $g^*_{c_c} = \frac{r-\delta}{1-a}$; $g_{c_w^A} = \frac{i-\delta_W}{1-a}$; $g_{c_W^R} = \frac{\eta+i}{1-a}$.[3]

Equations (4), (5), and (6) represent the consumption of the capitalists, actively and retired workers respectively. The similarity between us, Baranzini (1991) and Góes and Teixeira (2022) is that we all consider three consumption rates. The first one is for capitalists, the second for activity workers and the final is the retired workers. However, this model differs from Baranzini (1991) and Góes and Teixeira (2022) for considering imperfect markets, that is; $i < r$. Following Rust and Phelan (1997), the imperfection of markets is a necessary condition for Social Security to have a significant behavioural effect, because if individuals had access to a perfect market, they could design their own ideal retirement. Thus, the interest rate ($r$) is exogenous, capitalists have full access to perfect capital markets, and workers face a lower deposit interest rate ($i$) called the deposit interest rate, which only guarantees workers

[3] The mathematical algebraic manipulations of $g_{c_w^A}$ and $g_{c_w^R}$ are in Appendix 2A.

small savings to transfer income from the active period to the retired period. This assumption guarantees workers small savings to transfer income from working time to retirement time. Thus, it can be guaranteed that the contribution works as a social security system and not just as an income transfer process. In this vein, our model has three different growth rates of consumption: $g^{*}_{c_c}$ , $g_{c^A_w}$ ,$g_{c^R_W}$.

$$c^R_w(t) = \left[(1+\eta)\left\{t_c r k_c(t)^* + t_W\left[w + ik^A_W(t)\right]\right\} + \overline{k^R_W}\right] \tag{7}$$

Equation (7) shows the income transferred from capitalists and activity workers to retired workers. This equation is the PAYG process definition, where the younger generation leaves a part of their incomes to the elderlies. This formula differs from the original model presented by Baranzini (1991), as well as, by their extensions like Teixeira, Sugahara and Baranzini (2002), Wei and Araujo (2009), Sugahara, Aragón, da Cunha, Perdigão (2016), and Góes and Teixeira (2022). This Equation guarantees the minimum of survives, since, even exogenously, the government can impose a minimum value for each taxation, to ensure at least the same level of the consumption of the activity workers. In this case, we have a guarantee that the class mobility sustains, and the retired workers do not deteriorate their consumption. The maximization of its utility is subjective to its restriction of the capital stock variation, thus:

$$\dot{k}_C = (1 - t_C) r k_C - c_C \tag{8}$$

$$\dot{k}^A_W = (1 - t_W)\left(w + ik^A_W\right) - c^A_W \tag{9}$$

$$\dot{k}^R_W = (1+\eta)\left\{t_c r k_c + t_W\left[w + ik^A_W(t)\right]\right\} + \overline{k^R_W} - c^R_W(t) \tag{10}$$

Formulas (8) and (9) defines the public sector revenue by taxing the incomes and guarantee the workers personal income distribution in R. These equations show the behaviour of each capital stock (savings/investment functions). The taxations dealt here are direct on income, in addition, it works as a mechanism for social security discounting the inheritance. Equation (10) also represents the behaviour of the capital to the retired, however, since they do not save, this equation is null. In this vein, they will consume all their income provenience from the PAYG and a fixed amount invested when they were activity workers. Note that, since the workforce is raising or decreasing in time, the income provenience from PAYG depends on the level of the population growth rate.

As proposed by Kaldor (1955-6), the tax would be imposed as a personal tax at the level of the households, with progressive rates applicable to aggregate consumption. This allows the financing of social security, transferring part of the income collected by the capital accumulation to the most vulnerable class, the workers. The taxation of capitalists and younger workers deals as mechanisms for transferring income to the retirement of workers. For Hicks (1999) social insurance programs are more than expedient outcomes of particular working-class encounters with other powers. So, these are rights of the working class, which makes only that class retire, since capitalists do not work and live off the consumption of the capital's income, then they do not retire. From these equations, we have our system to analyse the effects of retirement on the model. This analysis is approached in the next section by using the Pontryagin Maximum Principle.

## 5. Maximization and optimal control

Optimal control is a set of differential equations describing the paths of the control variables that minimizes or maximizes the objective function. The optimal control problem takes into account the objective function, what we want to maximize, the equations that model the dynamics of the problem at each instant of time and the constraints of the problem. Finally, the initial and final conditions, intend to find, in a set of possible solutions, the admissible set that maximizes (minimizes) the objective function. The most important result in the theory of optimal control is the "Maximum Principle" (developed by Pontryangin, 1987), which is a fundamental result to obtaining the optimal solution to an optimal control problem. These are necessary optimality conditions, through this result, we have one method of finding candidates for optimal controls is by the constructive utilization of necessary conditions for optimality such in dynamic optimization problems.

In economics, we deal with the rationality principle, first presented by Turgot (1793), and structured as a microeconomic axiom by Walras (1874). He presented that all based agents in economies (for us, capitalists, and workers) look to maximize their utilities. According to Dorfman (1969), the basic equations of the maximum principle are the limit forms of the first-order necessary conditions for a maximum applied to the same problem. Besides that, he affirms "the same results deduced from the more familiar method of maximizing subject to a finite number of constraints." Dorfman (1969, p.827). Such an approach used here is shown in chapter 4 by Léonard and Van Long (1992), which follows the above orders:

1st - We have to determine our objective function and its restrictions.

2nd - We have to construct the Hamiltonian which will be optimized.

3rd - We have to deliver each first-order condition between the Hamiltonian and the state and costate variables.

4th - We have to approach the maximal principle.

**Proposition 1** - The PAYG retirement process depends on the amount of the capitalists' and workers' incomes, population growth rate and the growth rate of the consumption since their consumption level must be determined. The government revenue came from direct taxation on their incomes, which is transferred to the retired workers. Thus, since the retired workers do not leave an inheritance, they will consume all their income transferred and the capital accumulated when they were active workers. In this vein, considering the systems $(\dot{c_C},\dot{k_C})$, $(\dot{c}_W^A,\dot{k}_W^A)$, and $(\dot{c}_W^R,\dot{k}_W^R)$. In the dynamic formulas, we have to define the optimal solution for each class.[4]

**Proof**: Our problem sustains in a maximization problem, in which we must maximize the following utility functions:

$$\mathrm{MaxU_C} = \int_0^T e^{-\delta c t}\frac{1}{a}[c_C(t)]^a dt$$

$$\mathrm{MaxU_W^A} = \int_0^R e^{-\delta w t}\frac{1}{a}\left[c_W^A(t)\right]^a dt$$

$$\mathrm{MaxU_W^R} = \int_R^T e^{(1+\eta)t}\frac{1}{a}\left[c_W^R(t)\right]^a dt$$

Their restrictions are:

$$\dot{k}_C = (1-t_C)rk_C(t) - c_C(t)$$

$$\dot{k}_W^A = (1-t_W)\left[w + ik_W^A(t)\right] - c_W^A(t)$$

$$\dot{k}_W^R = (1+\eta)\left\{t_c rk_c + t_W\left[w + ik_W^A(t)\right]\right\} + \overline{k_W^R} - c_W^R(t)$$

In our model, the consumption functions are (4), (5), and (6), which determines the utility function (objective function), and the restrictions are (8), (9), and (10). Thus, we can structure our capitalists and workers Hamiltonians respectively, as:

$$H_c = e^{-\delta c t}\frac{1}{a}[c(t)]^a + \lambda_1[(1-t_C)rk_C(t) - c_C(t)]$$

[4] The Appendix 2A and 2B contains the mathematical proofs.

$$H_W^A = e^{-\delta w t}\frac{1}{a}\left[c_W^A(t)\right]^a + e^{nt}\frac{1}{a}\left[c_W^R(t)\right]^a + \lambda_2\left[(1-t_W)\left(w + ik_W^A(t)\right) - c_W^A(t)\right]$$

$$H_W^R = e^{(1+\eta)t}\frac{1}{a}\left[c_W^R(t)\right]^a + \lambda_3\left[(1+\eta)\{t_c r k_c(t) + t_W[w + ik_W^A(t)]\} + \acute{k_W^R} - c_W^R(t)\right]$$

Approaching the first-order condition for each Hamiltonian, we have the following results:

$$\frac{\partial H_C}{\partial c_C(t)} = c_C(t)^{a-1}e^{-\delta_c t} - \lambda_1 = 0 \rightarrow \lambda_1 = c_C(t)^{a-1}e^{-\delta_c t}$$

$$\dot{\lambda}_1(t) = \frac{-\partial H_C}{\partial k_C(t)} = -\lambda_1(1-t_C)r$$

$$\dot{k}_C(t) = \frac{\partial H_C}{\partial \lambda_1(t)} = (1-t_C)rk_C(t) - c_C(t)$$

$$\frac{\partial H_W^A}{\partial c_W^A(t)} = 0 = e^{-\delta w t}c_W^A(t)^{a-1} - \lambda_2$$

$$\dot{\lambda}_2 = \frac{-\partial H_W^A}{\partial k_W^A(t)} = -(1-t_W)i$$

$$\dot{k}_W^A = \frac{\partial H_W^A}{\partial \lambda_2} = (1-t_W)\left(w + ik_W^A\right) - c_W^A(t)$$

$$\frac{\partial H_W^R}{\partial c_W^R(t)} = 0 = e^{(1+\eta)t}c_W^R(t)^{a-1} - \lambda_3$$

$$\dot{\lambda}_3 = \frac{-\partial H_W^R}{\partial k_W^R(t)} = 0$$

$$\dot{k}_W^R = 0 = \frac{\partial H_W^R}{\partial \lambda_3} = (1+\eta)\{t_c r k_c(t) + t_W[w + ik_W^A(t)]\} + \acute{k_W^R} - c_W^R(t)$$

Approaching the Principle of Pontryagin Maximum, we find the trajectory equations of the capital and consumption to each class. First, we analyse the capitalists' results.

$$k_C^*(t) = \left(\frac{1-e^{R(n-r)}}{1-e^{T(g_{c_c}^*-r)}}\right)\left(\frac{r-g_{c_c}^*}{r}\right)k_0 e^{g_{c_c}^* t} \tag{11}$$

$$c_C^*(t) = (1-t_C)\left(\frac{1-e^{R(n-r)}}{1-e^{T(g_{c_c}^*-r)}}\right)(r-g_{c_c}^*)k_0 e^{g_{c_c}^* t} \tag{12}$$

Equation (11) depends on the level of the inheritance, but this result is not affected by the taxation. Our result differs from the one found by Góes and Teixeira (2022), in our case, the result grows exponentially in respect to the birth growth rate, and in their case is in respect also to the profit ratio. Equation (12) is directly and negatively affected by the taxation, transferring part of the consumption to the retired workers in this case, the only

difference between us and Góes and Teixeira (2022) is the taxation. We must point out that the taxation initially only appears in the capital accumulation (the restriction) formula, however, in equilibrium condition we actually have a compression of the capitalists' consumption $\left[\frac{\partial c_C^*(t)}{\partial t_C} < 0\right]$ to guarantee retirement. Analytically speaking, the income transfer came from consumption and not from the total capital. Therefore, since the capital stock is rising, this does not mean a prejudice against capitalists. Now, the workers' analysis:

$$k_W^{A\,*} = \left[\frac{\delta_W e^{-\delta_W t}}{[(1-t_W)i]^a}\right]^{\frac{1}{1-a}} - \frac{w_o e^{mt}}{i} \tag{13}$$

$$c_W^A(t)^* = \left[\frac{(1-t_W)i}{\delta_W e^{-\delta_W t}}\right]^{\frac{1}{a-1}} = \left[\frac{\delta_W e^{-\delta_W t}}{(1-t_W)i}\right]^{\frac{1}{1-a}} \tag{14}$$

Equation (13) is the stock of the activity worker's and, differently from the capitalists, now the taxation affects the amount, Wei and Araujo (2009) conclude that wages taxation does not affect the capital accumulation, however, in our model does $\left[\frac{\partial k_W^{A\,*}}{\partial t_W} > 0\right]$. Our result differs from the one found by Góes and Teixeira (2022) showing the taxation impact which restructured all the formulas. The same difference is presented in (10), which shows a positive relationship between the worker's taxation and the consumption $\left[\frac{\partial c_W^A(t)^*}{\partial t_W} > 0\right]$, reflecting the increase of retired consumption and the activity workers' capital stock. We also find the optimal consumption of the retired workers.

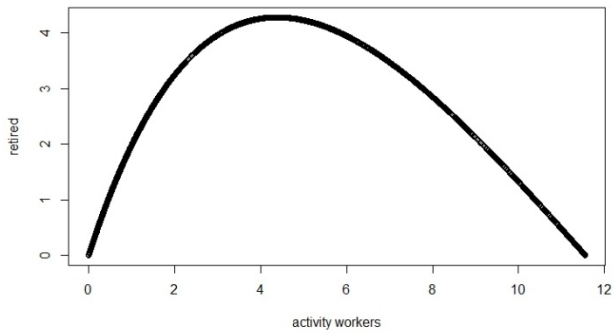
$$c_W^R(t)^* = (1+\eta)\{t_c r k_c(t)^* + t_W[w + i k_W^A(t)^*]\} + \overline{k_W^R} \tag{15}$$

Equation (15) shows the retired workers' consumption in equilibrium. It is interesting the growth rate of the population affects this equilibrium, and that conclusion works to present the robustness of the PAYG system. This result agrees to the one presented in Nogueira Silva, Morreto and Kappes (2021) conclusions. We also accomplish this by considering that workers' do save part of their income when they are activity workers, and the amount saved will be consumed when they are retired. The next section presents the numerical simulation.

## 6. Numerical Simulation and Analysis

According to Lavoie (2014, p. 37), computational analysis, providing more ammunition in the unorthodox search for an explanation and causal mechanisms, is a powerful weapon in the battle of ideas. Appendix 3 presents the table with the specific variables and values. This section approached the Dynamic Ordinary Equation computational analysis, by using the Software R with the deSolve path. Our interest here is to provide a numerical simulation to justify the behaviour of our model. In this section, we properly analyse the capital accumulation: capitalists, retired workers and activity workers. Figure 1 simulates the capital accumulation of the worker's class:

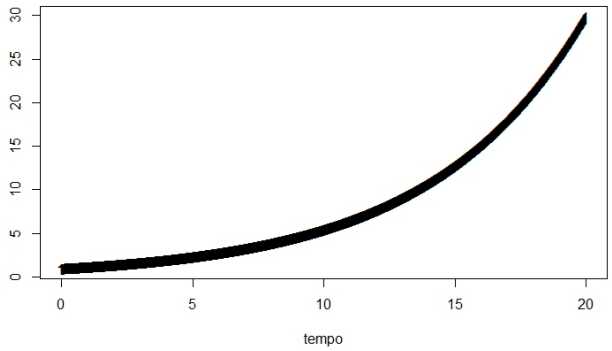
**Figure 1 - Worker's capital accumulation**




Source: authors

As we can see, Figure 1 proves that, along the worker's life, the active ones will accumulate their capital, but the retired ones do not leave inheritance and, at first, they will accumulate some capital, since they are receiving capital from government PAYG process, but at some point they will increase their consumption faster than the accumulation and will consume all the capital up to death. This assumption is plausible for real life, since old people needs more resources to guarantee the minimum for subsistence, since they will need to spend more with medicine, health food, exercises, insurance and other additional costs. Figure 2 shows the capitalist capital accumulation, thus:

**Figure 2 - Capitalist Capital Accumulation**




Source: authors

The second figure shows that at first the capitalists only have one piece of capital, but along the time they will accumulate capital and, since they leave inheritance, the final point is the amount of capital leaved to the next generation of capitalists. It is interesting that the government activity exponentiated the capitalist capital accumulation, which confirms the effects on the profit rate presented by Steedman (1972) and discussed in this paper. The consumption of the capitalists is really small in comparison to their earns, and this guarantee the transfer of capital between generations. The next section presents the concluding remarks.

## 7. Concluding Remarks

Our paper contributes to four aspects:

(I) We modelled Baranzinis' model concerning an imperfect markets and new consumption function of the capitalists, activity, and retired workers. We consider direct taxation on the capitalists and activity workers income. Here, we show three different consumption growth rates since the capitalists and workers will have different interest rates. In this vein, with these new assumptions, we structured a system that made possible the analysis of the personal income distribution behaviour.

(II) Considering the new formulation, we could approach the Principle of Pontryagin Maximum, to deliver the optimal capital stock and consumption to each class. We proved the impact of the populational growth rate to retired consumption, which ensures the robustness of the PAYG system.

(III) We construct, from the beginning to the end of this article a historical and theoretical debate around the pension theme.

(IV) The numerical simulation confirms the results presented in section 5, especially the Steedman's Cambridge Equation proposal.

To conclude, the results obtained in the present article advance the economic literature. However, there remain considerable analytical issues to deal with, like an empirical analysis or the stability condition of the model.

## References


Acemoglu, D. (2009), Growth with overlapping generations. In: *Introduction to Modern Economic Growth*, New Jersey: Princeton University Press: 327-358.

Balestra, P.; Baranzini, M. (1971), Some optimal aspects in a two class growth model with a differentiated interest rate, *Kyklos*, 24(2): 240-256. DOI: https://doi.org/10.1111/j.1467-6435.1971.tb00808.x

Baranzini, M. (1991), *A theory of wealth distribution and accumulation* (1st ed). New York: Oxford University Press.

Baranzini, M.; Benjuino, S. O.; Teixeira, J. R. (2003), Taxation on Intergenerational Bequest and Redistribution of Wealth in a Class-Setting. *Texto para discussão, n. 279*. Brasília: Departamento de Economia, Universidade de Brasília.

Blecker, R.; Setterfield, M. (2019), Introduction: competing theories of production, growth and distribution. In: *Heterodox Macroeconomics*, Massachusetts: Edward Elgar Publishing Limited: 1-56.

Dorfman, R. (1969), An economic interpretation of optimal control theory. *The American Economic Review*, 59(5): 817-831. DOI: https://www.jstor.org/stable/1810679

Drèze, J.; Khera, R. (2017), Recent social security initiatives in India. *World Development*, 98: 555-572. DOI: https://doi.org/10.1016/j.worlddev.2017.05.035

Ellery Junior, R. D. G.; Bugarin, M. N. (2003), Previdência social e bem estar no Brasil. *Revista Brasileira de Economia*, 57(1): 27-57. DOI: https://doi.org/10.1590/S0034-71402003000100002

Feldstein, M. (1976), Social security and saving: The extended life cycle theory. *The American Economic Review*, 66(2): 77-86. DOI: https://www.jstor.org/stable/1817202

Feldstein, M. (1978), Do private pensions increase national savings?. *Journal of Public Economics*, 10(3): 277-293. DOI: https://doi.org/10.1016/0047-2727(78)90049-X

Foley, D. K.; Michl, T. R. (1999), Government debt and social security: the overlapping generations model. In: *Growth and distribution*, Cambridge: Harvard University Press, 225-255.

Gertler, M. (1999), Government debt and social security in a life-cycle economy. *Carnegie-Rochester Conference Series on Public Policy*, 50(1): 61-110. DOI: https://doi.org/10.1016/S0167-2231(99)00022-6

Góes, G. S.; Teixeira, J. R. (2022), Growth and income distribution: The heritage effect on the capital accumulation process. *Structural Change and Economic Dynamics*, 61: 458-462. DOI: https://doi.org/10.1016/j.strueco.2020.03.009

Harrod, R. F. (1948), Towards a Dynamic Economics: Some recent developments of economic theory and their application to policy. London: MacMillan and Company.

Heijdra, B. J. (2002), *Foundations of modern macroeconomics*. New York: Oxford university press.

Hicks, A. (1999), *Social democracy and welfare capitalism*. New York: Cornell University Press.

Holland, M.; Malaga B., G. R. T. (2018), Previdência social no Brasil: propostas para uma reforma de longo prazo. *Texto para discussão, n. 487*, 29p.

Kaldor, N. (1955), Alternative theories of distribution. *The review of economic studies*, 23(2): 83-100. DOI: http://www.jstor.org/stable/2296292?origin=JSTOR-pdf

Keynes, J. M. (1936), *The general theory of employment, interest, and money*. Londres: Palgrave Macmillan.

Lavinas, L. (2018), The collateralization of social policy under financialized capitalism. *Development and Change*, 49(2): 502-517. DOI: https://doi.org/10.1111/dech.12370

Lavoie, M. (2014), Essential of heterodox and post-Keynesian economics. In: *Post-Keynesian Economics: New Foundations*, Massachusetts: Edward Elgar Publishing Limited: 1-71.

Leonard, D., Van Long, N.; Ngo, V. L. (1992), *Optimal control theory and static optimization in economics*. Cambridge: Cambridge University Press.

Miller, J. (2020), Resuscitating Private Social Security Accounts: Countering Inequality with Panic and Prevarication. *NEW SOLUTIONS: A Journal of Environmental and Occupational Health Policy*, 30(1): 52-56. DOI: https://doi.org/10.1177/1048291120905081

Modigliani, F.; Brumberg, R. (1954), Utility analysis and the consumption function: An interpretation of cross-section data. In: *Post-Keynesian economics*, London: Allen and Unwin, 388-436.

Nell, E. J. (2013), Reinventing Macroeconomics: What are the Questions?. In: HARCOURT, G. C.; KRIESLER, Peter. *The Oxford Handbook of Post-Keynesian Economics, Volume 1: Theory and Origins* (1. ed.). Oxford: Oxford handbooks online: 1-19.

Nogueira Silva, D.; Morrone, H.; Kappes, S. (2021), Assessing pension system outcomes in Brazil: a stock-flow consistent analysis. *Brazilian Keynesian Review*, 7(2): 243-271. DOI: https://doi.org/10.33834/bkr.v7i2.249

Pasinetti, L. L. (1962), Rate of profit and income distribution in relation to the rate of economic growth. In: *Readings in the Theory of Growth*. London: Palgrave Macmillan: 184-196.

Pasinetti, L. L. (2012), A few counter-factual hypotheses on the current economic crisis. *Cambridge Journal of Economics*, 36(6): 1433-1453. DOI: https://www.jstor.org/stable/24232474

Pontryagin, L. S. (1987), *Mathematical theory of optimal processes*. Florida: CRC press.

Portella, A. A.; de Souza, B. C. N. (2021), A nova ofensiva ao sistema previdenciário brasileiro: um paralelo com o modelo privatista chileno. *Revista Direito, Estado e Sociedade*, 58: 14-41. DOI: https://doi.org/10.17808/des.0.1192

Rust, J.; Phelan, C. (1997), How Social Security and Medicare Affect Retirement Behavior In: a World of Incomplete Markets. *Econometrica*, 65(4): 781-831. DOI: https://doi.org/10.2307/2171940

Steedman, I. (1972), The state and the outcome of the Pasinetti process. *The Economic Journal*, 82(328): 1387-1395. DOI: https://doi.org/10.2307/2231318

Sugahara, R. N.; Aragón, E. K. S. B.; da Cunha, M. S.; Perdigão C. (2016), Effects of the taxation on inheritance in a microfounded model of growth and post-Keynesian

distribution with overlapping generations and life cycle. *EconomiA*, 17(3): 340-350. DOI: https://doi.org/10.1016/j.econ.2016.09.002

Teixeira, J. R., Suguhara, R. N., and Baranzini, M. (2002), On micro-foundations of the Kaldor-Pasinetti growth model with taxation on bequest. *Brazilian Journal of Business Economics*, 2(1): 9-23. DOI:

Turgot, A. R. J. (1793), *Reflections on the Formation and Distribution of Wealt*. London: E. Spragg.

Walras, L. (1874), *Éléments d'économie politique pure, ou, Théorie de la richesse sociale*. London: Forgotten Books

Wei, H. C. C.; Araújo, R. S. A. (2009), A post keynesian model of growth and wealth distribution: government's optimal tax choice using an intertemporal infinitely representative agent. *Revista de Economia Mackenzie*, 7(1): 9-29.

Wolff, E. (1988), Life cycle savings and the individual distribution of wealth by class. In: *Modelling the accumulation and distribution of wealth*, New York: Clarendon Press: 261-280.

## APPENDIX 1: NOTATIONS

| | |
|---|---|
| $\dot{c}_C$ | Variation of capitalists' consumption on time |
| $\dot{c}_W$ | Variation of workers' consumption on time |
| $\dot{k}_C$ | Variation of capitalists' capital stock on time |
| $\dot{k}_C^a$ | Variation of the capital stock owned by capitalist who is active |
| $\dot{k}_C^p$ | Variation of the retired capitalists' stock of capital on time |
| $\dot{k}_W$ | Variation of workers' capital stock on time |
| $\dot{k}_W^a$ | Variation of the active workers' stock of capital on time |
| $\dot{k}_W^p$ | Variation of the retired workers' stock of capital on time |
| $c_c(t)$ | Capitalists' consumption at time $t$ |
| $c_w(t)$ | Workers' consumption at time $t$ |
| $c_w^A$ | Workers' consumption when they are active |
| $c_w^R$ | Workers' consumption when they are retired |
| $e^{rk}$ | Consumption at time $t + k$ |
| $g^*$ | Number of births rate in optimal |
| $H_C$ | Capitalists' Hamiltonian |
| $H_W$ | Workers' Hamiltonian |
| $k_0$ | Capital stock that they have inherited. |
| $k_C$ | Capitalists' capital stock |
| $k_c^a$ | Capital stock owned by a capitalist during who is active |

| | |
|---|---|
| $k_c^p$ | The financial capital stock of a retired capitalist |
| $k_W$ | Workers' capital stock |
| $k_w^a$ | Capital stock owned by a worker during who is active |
| $k_w^p$ | Capital stock owned by a worker during who is retired |
| $t_C$ | Capital taxation |
| $t_W$ | Wage taxation |
| $U_c$ | Utility function for consumption from the capitalists |
| $U_w$ | Utility function for consumption from the workers |
| $\delta_C$ | Capitalists' Pure time-preference |
| $\delta_W$ | Workers' Pure time-preference |
| $\lambda_i$ | Shadow price, $i = 1,2$ |
| $B$ | Bequest |
| $c(t)$ | Consumption at time $t$ |
| $H$ | Hamiltonian |
| $i$ | Deposit interest rate |
| $K$ | Capital |
| $L$ | Labour |
| $m$ | Rate of labour-augmenting technical progress |
| $n$ | The natural rate of growth |
| $p$ | A fixed proportion of the wage-rate he would earn if he was still working |

| | |
|---|---|
| R | Retirement age |
| r | Rate of interest |
| T | Die age |
| t | Borne age |
| v | End of the active period |
| w | Wage-rate |
| Y | Output |
| η | Population growth rate |
| $a$ | time-preference |
| $g$ | Number of births rate |

## APPENDIX 2 – MATHEMATICAL MANIPULATIONS

### A - CAPITALISTS

$$\text{Max}U_C = \int_0^T e^{-\delta t}\frac{1}{a}[c(t)]^a dt$$

s.t. $\dot{k}_C = (1-t_C)rk_C - c_C$

The Hamiltonian:

$$H_c = e^{-\delta t}\frac{1}{a}[c(t)]^a + \lambda_1[(1-t_C)rk_C - c_C(t)]$$

The first-order conditions:

$$\frac{\partial H_C}{\partial c_C(t)} = c_C(t)^{a-1}e^{-\delta t} - \lambda_1 = 0 \rightarrow \lambda_1 = c_C(t)^{a-1}e^{-\delta t} \quad (1A)$$

$$\dot{\lambda}_1(t) = \frac{-\partial H_C}{\partial k_C(t)} = -\lambda_1(1-t_C)r \quad (2A)$$

$$\dot{k}_C(t) = \frac{\partial H_C}{\partial \lambda_1(t)} = (1-t_C)rk_C - c_C(t) \quad (3A)$$

From (1), we find the second $\dot{\lambda}_1(t)$:

$$\dot{\lambda}_1 = (a-1)c_C(t)^{a-2}\dot{c}_C e^{-\delta_C t} - \delta e^{-\delta_C t}c_C(t)^{a-1} \quad (4A)$$

Equalizing (4) and (2)

$$-c_C(t)^{a-1}e^{-\delta_C t}(1-t_C)r + \delta_C e^{-\delta_C t}c_C(t)^{a-1} = (a-1)c_C(t)^{a-2}\dot{c}_C e^{-\delta_C t}$$

$$\frac{c_C(t)[\delta_C-(1-t_C)r]}{(a-1)} = \dot{c}_C \quad (5A)$$

From (5), we have $t_C^*$:

$$\frac{c_C(t)[\delta_C-(1-t_C)r]}{(a-1)} = 0 \rightarrow \delta_C - (1-t_C)r = 0 \rightarrow (1-t_C) = \frac{\delta_C}{r} \rightarrow t_C^* = 1 - \frac{\delta_C}{r} \quad (6A)$$

From (3) and (6), we have $c_C(t)$

$$c_C(t) = \left(1 - 1 + \frac{\delta_C}{r}\right) r k_C \rightarrow c_C^*(t) = \delta_C k_C^*(t) \quad (7A)$$

We have capitalists' capital stock, from Baranzini (1991) and Góes and Teixeira (2020):

$$k_c^a(t) = k_0 e^{nt} + \int_0^t [(r-n)k_0 e^{nt} - c_c(v)] e^{r(t-v)} dv = k_0 e^{rt}\left[1 - B\left(1 - e^{(g^*-r)t}\right)\right] \quad (8A)$$

$$k_c^p(t) = [k|c^a(R) - k_0 e^{Rn}] e^{r(t-R)} + \int_R^t c_c(v) e^{r(t-v)} dv = k_0 e^{rt}\left(e^{(g^*-r)t} - e^{(g^*-r)T}\right) \quad (9A)$$

Thus:

$$k_C(t) = k_C^a + k_C^p \rightarrow \ln[k_C(t)] = \ln\left[k_C^a + k_C^p\right] \rightarrow \frac{\dot{k}_C}{k_C} = \frac{\dot{k}_C^a}{k_C} + \frac{\dot{k}_C^p}{k_C} \quad (10A)$$

From (8), we have:

$$k_C^a = k_0 e^{rt}\left[1 - B\left(1 - e^{(g^*-r)t}\right)\right] \rightarrow \ln(k_C^a) = \ln k_0 + rt + \ln\left[1 - B\left(1 - e^{(g^*-r)t}\right)\right]$$

$$\frac{\dot{k}_C^a}{k_C^a} = r + \frac{(g^*-r)Be^{(g^*-r)t}k_0 e^{rt}}{k_c^a} \rightarrow \dot{k}_C^a = rk_c^a + (g^* - r)Be^{(g^*-r)t}k_0 e^{rt} \quad (11A)$$

Considering $\dot{k}_C^a = 0$, thus:

$$k_C^a(t)^* = \frac{(g^*-r)Be^{(g^*-r)t}k_0 e^{rt}}{r} \quad (12A)$$

From (9), we have:

$$\frac{\dot{k}_c^p}{k_c^p} = r + \frac{(g^*-r)\left[e^{(g^*-r)t} - e^{(g^*-r)T}\right]}{e^{(g^*-r)t} - e^{(g^*-r)T}} \rightarrow \frac{\dot{k}_c^p}{k_c^p} = r + (g^* - r) \rightarrow \dot{k}_c^p = g^* k_c^p \quad (13A)$$

From (10), we find:

$$\frac{\dot{k}_C}{k_C} = \frac{\dot{k}_C^a}{k_C} + \frac{\dot{k}_C^p}{k_C} \rightarrow \dot{k}_C = \dot{k}_C^a + \dot{k}_C^p \rightarrow \dot{k}_C = rk_C^a + (g^* - r)Be^{(g^*-r)t}k_0e^{rt} + g^*k_c^p$$

$$k_C(t)^* = Be^{(g^*-r)t}k_0e^{rt}\frac{(r-g^*)}{r} \tag{14A}$$

Since: $B = \left(\frac{1-e^{R(n-r)}}{1-e^{T(g^*-r)}}\right)$, see Góes and Teixeira (2022), thus, we have the optimal points:

$$k_C(t)^* = \left(\frac{1-e^{R(n-r)}}{1-e^{T(g^*-r)}}\right)e^{(g^*-r)t}k_0e^{rt}\frac{(r-g^*)}{r} \tag{15A}$$

$$c_C^*(t) = \delta_C\left(\frac{1-e^{R(n-r)}}{1-e^{T(g^*-r)}}\right)e^{(g^*-r)t}k_0e^{rt}\frac{(r-g^*)}{r}$$

Since: $t_C^* = 1 - \frac{\delta_C}{r}$, thus:

$$c_C^*(t) = (1-t_C)\left(\frac{1-e^{R(n-r)}}{1-e^{T(g^*-r)}}\right)e^{(g^*-r)t}k_0e^{rt}(r-g^*) \tag{16A}$$

**B - WORKERS**

1st – Activity Workers

The Hamiltonian:

$$H_W^A = e^{-\delta wt}\frac{1}{a}\left[c_W^A(t)\right]^a + \lambda_2\left[(1-t_W)\left(w + ik_W^A\right) - c_W^A(t)\right] \tag{1C}$$

Applying the first-order conditions:

$$\frac{\partial H_W^A}{\partial c_W^A(t)} = 0 = e^{-\delta wt}c_W^A(t)^{a-1} - \lambda_2 \tag{2C}$$

$$\dot{\lambda}_2 = \frac{-\partial H_W^A}{\partial k_W^A(t)} = -(1-t_W)i \tag{3C}$$

$$\dot{k}_W^A = \frac{\partial H_W^A}{\partial \lambda_2} = (1-t_W)\left(w + ik_W^A\right) - c_W^A(t) \tag{4C}$$

Deriving (2C) with respect to time:

$$\dot{\lambda}_2 = -\delta_W e^{-\delta wt}c_W^A(t)^{a-1} + e^{-\delta wt}(a-1)c_W^A(t)^{a-2}\dot{c}_W^A \tag{5C}$$

Equalizing (5C) and (3C):

$$-(1-t_W)i = -\delta_W e^{-\delta w t} c_W^A(t)^{a-1} + e^{-\delta w t}(a-1)c_W^A(t)^{a-2}\dot{c}_W^A \quad (6C)$$

Isolating $\dot{c}_W^A$ in (6C):

$$\frac{[\delta_W e^{-\delta w t} c_W^A(t)^{a-1} - (1-t_W)i]}{e^{-\delta w t}(a-1)c_W^A(t)^{a-2}} = \dot{c}_W^A \quad (7C)$$

Considering (7C), if $\dot{c}_W^A = 0$

$$\frac{[\delta_W e^{-\delta w t} c_W^A(t)^{a-1} - (1-t_W)i]}{e^{-\delta w t}(a-1)c_W^A(t)^{a-2}} = 0 \rightarrow c_W^A(t)^{a-1} = \frac{(1-t_W)i}{\delta_W e^{-\delta w t}}$$

$$c_W^A(t)^* = \left[\frac{(1-t_W)i}{\delta_W e^{-\delta w t}}\right]^{\frac{1}{a-1}} = \left[\frac{\delta_W e^{-\delta w t}}{(1-t_W)i}\right]^{\frac{1}{1-a}} \quad (8C)$$

From (4C), we have:

$$0 = (1-t_W)\left(w + ik_W^A\right) - c_W^A(t)^*$$

$$c_W^A(t)^* = (1-t_W)\left(w + ik_W^A\right)$$

$$c_W^A(t)^* - (1-t_W)w = (1-t_W)ik_W^A$$

$$k_W^{A\,*} = \frac{c_W^A(t)^*}{(1-t_W)i} - \frac{w}{i}$$

$$k_W^{A\,*} = \left[\frac{[(1-t_W)i]^a}{\delta_W e^{-\delta w t}}\right]^{\frac{1}{a-1}} - \frac{w}{i} = \left[\frac{\delta_W e^{-\delta w t}}{[(1-t_W)i]^a}\right]^{\frac{1}{1-a}} - \frac{w}{i}$$

Baranzini (1991, p. 163) define $w = w_o e^{mt}$.

$$k_W^{A\,*} = \left[\frac{\delta_W e^{-\delta w t}}{[(1-t_W)i]^a}\right]^{\frac{1}{1-a}} - \frac{w_o e^{mt}}{i} \quad (9C)$$

2nd – Retired Workers:

The Hamiltonian:

$$H_W^R = e^{\eta t}\frac{1}{a}\left[c_W^R(t)\right]^a + \lambda_3\left[(1+\eta)\left\{t_c r k_c + t_W\left[w + i k_W^A(t)\right]\right\} + \overline{k_W^R} - c_W^R(t)\right] \quad (10C)$$

Approaching the first-order conditions:

$$\frac{\partial H_W^R}{\partial c_W^R(t)} = 0 = e^{\eta t} c_W^R(t)^{a-1} - \lambda_3 \quad (11C)$$

$$\dot{\lambda}_3 = \frac{-\partial H_W^R}{\partial k_W^R(t)} = 0 \quad (12C)$$

$$\dot{k}_W^R = 0 = \frac{\partial H_W^R}{\partial \lambda_3} = (1+\eta)\left\{t_c r k_c + t_W\left[w + i k_W^A(t)\right]\right\} + k_W^R - c_W^R(t) \quad (13C)$$

From (11C), we have:

$$0 = e^{\eta t} c_W^R(t)^{a-1} - \lambda_3 \rightarrow \lambda_3 = e^{\eta t} c_W^R(t)^{a-1}$$

$$\eta e^{\eta t} c_W^R(t)^{a-1} + e^{\eta t}(a-1) c_W^R(t)^{a-2}\dot{c}_W^R = 0$$

$$e^{\eta t}(a-1) c_W^R(t)^{a-2}\dot{c}_W^R = -\eta e^{\eta t} c_W^R(t)^{a-1}$$

$$\dot{c}_W^R = \frac{-\eta e^{\eta t} c_W^R(t)^{a-1}}{e^{\eta t}(a-1) c_W^R(t)^{a-2}}$$

$$\dot{c}_W^R = \frac{\eta e^{\eta t} c_W^R(t)^{a-1}}{e^{\eta t}(1-a) c_W^R(t)^{a-2}}$$

$$\dot{c}_W^R = \frac{\eta c_W^R(t)}{(1-a)} \quad (14C)$$

From (13C), we have:

$$0 = (1+\eta)\left\{t_c r k_c + t_W\left[w + i k_W^A(t)\right]\right\} + \overline{k_W^R} - c_W^R(t)$$

$$c_W^R(t)^* = (1+\eta)\left\{t_c r k_c(t)^* + t_W\left[w + i k_W^A(t)^*\right]\right\} + \overline{k_W^R} \quad (15C)$$

## APPENDIX 3 – NUMERICAL SIMULATION VARIABLES AND VALUES

The values presented here are hypothetical, but based on estimated values for emerging economies such as Latin America countries. The initial values were calculated based on the parameters and/or theoretical interpretation.

Parameters

| Parameter | Value |
|---|---|
| $t_c$ | 0,15 |
| $t_w$ | 0,3 |
| $r$ | 0,2 |
| $w$ | 0,6 |
| $i$ | 0,06 |
| $\eta$ | 0,02 |
| $\delta$ | 0,14 |
| $\delta_w$ | 0,05 |
| $\alpha$ | 0,1 |
| $k_w^{\acute{r}}$ | 1 |

Initial Values

| Variable | Value |
|---|---|
| $k_c$ | 1 |
| $k_w^a$ | 0 |
| $k_r^w$ | 0 |
| $c_c$ | 0,00036 |
| $c_w^a$ | 0,04657 |
| $c_w^r$ | 0,31267 |

# ECONOMIA BRASILEIRA: QUATRO DÉCADAS DE "QUASE" ESTAGNAÇÃO

*Brazilian economy: four decades of near stagnation*

**Adalmir Marquetti***

**Alessandro Donadio Miebach†**

## Resumo

O presente artigo discute as quatro décadas de quase estagnação e as possibilidades de retomada do crescimento econômico da economia brasileira. Enquanto nos países centrais há indicações do abandono de muitos elementos centrais do neoliberalismo, no Brasil houve a adoção de um neoliberalismo tardio após 2016. A condição necessária para a retomada do crescimento é a superação do neoliberalismo tardio na economia brasileira com a construção de um novo consenso social.

**Palavras Chaves**: Economia brasileira; Produtividade do trabalho; Distribuição de renda; Crescimento econômico, Neoliberalismo.
**Códigos JEL**: E11; E12; O43.

## Abstract

The article discusses the four decades of near stagnation and the possibilities of resuming economic growth in the Brazilian economy. While in the central countries there are indications of the abandonment of many central elements of neoliberalism, in Brazil there was the adoption of late neoliberalism after 2016. The necessary condition for the resumption of economic growth in Brazil is the overcoming of late neoliberalism with the construction of a new social consensus.

**Keywords**: Brazilian economy; Labor productivity; Income distribution; Economic growth; Neoliberalism.
**JEL code**: E11; E12; O43.

* Doutor em Economia. Professor do Programa de Pós-graduação em Economia da PUCRS. Contato: aam@pucrs.br

† Doutor em Economia. Professor do Programa de Pós-Graduação em Economia da UFRGS. Contato: aledonadio@gmail.com

## 1. Introdução

A sociedade brasileira vive uma crise econômica, social e política. O declínio do PIB per capita na década de 2010, associado aos efeitos da pandemia, resultou na queda do padrão de vida, fortalecendo o debate sobre a grande estagnação da economia brasileira. A própria disputa pela presidência mostrou a necessidade de retomar o crescimento econômico. A compreensão das causas de baixo crescimento e da estagnação nas últimas décadas são condições primárias para a sociedade brasileira estabelecer estratégias de aceleração do crescimento econômico.

O presente texto investiga as causas da estagnação e os condicionantes centrais para a retomada do crescimento do País. Para tanto é discutida a trajetória da produtividade do trabalho ao longo do período de estagnação. O aumento da produtividade do trabalho é elemento central para a melhora da qualidade de vida da população. A "quase" estagnação é entendida como fenômeno associado à queda da rentabilidade do capital e à dinâmica do neoliberalismo e seus impactos na economia brasileira.

A recente desaceleração do crescimento vincula-se ao processo de estagnação de longo prazo da economia brasileira. A análise é realizada a partir do estudo das relações entre a taxa de lucro, o investimento, o crescimento econômico e a distribuição funcional da renda. Entre as condições para a retomada do crescimento econômico está a organização de um consenso político compatível com a adoção de políticas públicas desenvolvimentistas e o abandono dos elementos centrais do neoliberalismo.

O artigo está organizado em quatro seções, além da introdução. A segunda seção apresenta em linhas gerais a trajetória da produtividade do trabalho e seus condicionantes sobre a economia brasileira. A terceira discute a crise recente da economia brasileira à luz do neoliberalismo, bem como os elementos centrais para a retomada do crescimento da economia brasileira. A última seção conclui o artigo.

## 2. Produtividade do trabalho e acumulação de capital no Brasil

Entre 1947 e 1980, no período desenvolvimentista, a produtividade do trabalho, medida pela razão entre o PIB e o número de trabalhadores, expandiu 4,3% ao ano; de 1980 a 2021 a taxa de crescimento foi de 0,28% ao ano. A produtividade do trabalho teve uma "quase" estagnação nas últimas quatro décadas. O que ocorreu e como superar a "quase estagnação" são questões fundamentais para os pensadores brasileiros.

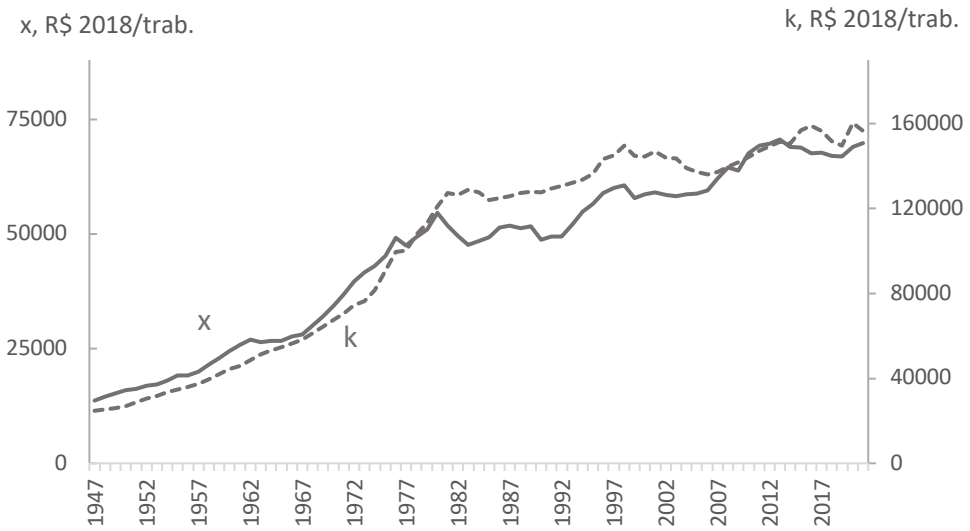
A origem do reduzido crescimento está na queda da taxa de acumulação de capital físico, composto fundamentalmente de máquinas, equipamentos, construções não residenciais e residenciais. A acumulação de capital físico permite a incorporação das novas técnicas que elevam a produtividade do trabalho. A Figura 1 mostra que a produtividade do trabalho expandiu rapidamente, enquanto crescia o emprego de capital físico por trabalhador. Com a queda da taxa de acumulação após 1980, o Brasil entrou na "quase" estagnação.

A escolaridade média da população entre 15 e 64 anos aumentou de 2,1 anos em 1950 para 3 anos em 1980, atingindo 8,6 anos em 2015 (Barro e Lee, 2013). Embora seja necessário melhorar a qualidade da educação, o problema não é a acumulação de capital humano, que expandiu a 3% ao ano na "quase" estagnação. Também é importante considerar que literatura empírica encontra taxas elevadas de retorno privado para a escolaridade, enquanto mostra um efeito reduzido do capital humano no crescimento econômico (Pritchett, 2001).

A taxa de acumulação de capital declinou a partir de 1980 devido à queda da taxa de lucro que se intensificou com a implementação do II Plano Nacional de Desenvolvimento, a resposta do regime militar à crise da Idade Dourada nos países centrais. A crise da dívida externa reduziu a capacidade de investimento do setor público na década de 1980. Quando o Estado recuperou sua capacidade de investimento na década de 1990, vigorava o neoliberalismo. Caberia ao mercado determinar os rumos do desenvolvimento, o objetivo das grandes empresas era elevar o preço das ações no curto prazo através da distribuição de lucros e dividendos, apesar da redução do investimento produtivo.

Houve a desindustrialização da economia brasileira a partir de meados da década de 1980. O investimento do setor privado em capital produtivo, em particular, na indústria de transformação, perdeu rentabilidade, enquanto aumentou a lucratividade relativa do investimento no setor financeiro e na produção de commodities. A mudança na rentabilidade dos setores produtivos é fator importante para entender a desindustrialização. A indústria possui maior produtividade do trabalho que os serviços e a agropecuária.

**Figura 1 - A produtividade do trabalho (x) e a relação capital físico por trabalhador (k) no Brasil: 1947-2021**




Fonte: Marquetti et al. (2023)

## 3. O Neoliberalismo Tardio e a Recuperação do Crescimento

O Brasil possui um papel subordinado na economia capitalista mundial no que se refere as mudanças institucionais, tecnológicas, bem como na posição relativa de sua classe social dominante na burguesia mundial. Com atraso temporal, o Brasil reproduz as mudanças institucionais que ocorrem nos países líderes. O capitalismo apresenta ondas longas que se caracterizam por uma determinada combinação entre tecnologia e organização institucional que resultam em diferentes taxas de acumulação de capital e de crescimento. A estrutura produtiva dos países é afetada pelos incentivos decorrentes da rentabilidade setorial e pela divisão internacional do trabalho.

As crises estruturais são crises da onda longa. A grande depressão de 1930 foi a crise do liberalismo econômico, a crise de 1973 foi a da idade dourada e a crise de 2008 foi a crise do neoliberalismo. Em torno de 1980, os países centrais fizeram reformas institucionais que favoreceram o capital, principalmente o financeiro. As novas tecnologias de informação e comunicação permitiram mudanças organizacionais nas empresas e abriram possibilidades de aumentos nas produtividades do trabalho e do capital. O 'mercado' tornou-se o mecanismo fundamental de alocação de recursos, houve restauração parcial da lucratividade. O neoliberalismo é uma fase do capitalismo originada da crise da idade dourada.

O neoliberalismo atribui ao mercado uma propriedade quase que imanente de alocar os recursos eficientemente. Baseado em tal noção axiomática, são propostas reformas cujo principal objetivo consiste em transferir ao mercado os critérios de alocação. Em muitos

casos, o que é ofertado como serviços públicos passaria a ser fornecido como mercadorias com a justificativa de melhorar a eficiência alocativa.

Contudo, o neoliberalismo requer a ampliação dos espaços de valorização para converter ativos de capital em outros tipos de ativos de capital financeiro. Esse movimento resultou em inovações financeira e bolhas especulativas nos países desenvolvidos e em desenvolvimento. A crise financeira de 2007-08 foi a crise estrutural do neoliberalismo. As dificuldades na superação da crise nos países avançados criaram o espaço para a crítica dos dogmas neoliberais.

A eleição de Donald Trump para a presidência dos Estados Unidos e a aprovação da saída do Reino Unido da União Europeia revelam que as ideias associadas as vantagens do livre comércio passam por intensa contestação. A pandemia de COVID-19 resultou em uma ruptura entre o padrão de atuação estatal e as concepções neoliberais, nas quais a alocação de recursos via mercado é assumida como intrinsicamente eficiente. Ao mesmo tempo, acentuaram-se as críticas ao aumento da desigualdade engendrados nas décadas neoliberais com os impactos assimétricos da pandemia, que atingiram com maior intensidade os mais pobres.

A crise nas cadeias de suprimento e a guerra entre Rússia e Ucrânia também colaborou nessa revisão crítica. Houve uma intensificação no cenário internacional das tensões de natureza geopolíticas, o que se associa em uma maior atuação estatal e uma mudança no processo de globalização. Apesar do aumento da inflação a partir do final de 2021 ter provocado as respostas convencionais de política monetária, não há indicação de retomada dos padrões de governança estatal neoliberal na maioria das economias avançadas e em desenvolvimento de grande porte.

Os novos padrões de governança estatal se associam a uma renovação acerca do planejamento e da coordenação do Estado no processo de crescimento econômico e desenvolvimento tecnológico e social. O governo Biden adotou uma política para revitalizar a indústria de transformação e proteger as cadeias de suprimentos críticas dos Estados Unidos (Atlantic Council, 2022). Há claras indicações da superação do neoliberalismo, com mudanças institucionais e na forma de atuação do estado.

A trajetória do neoliberalismo brevemente descrita acima impactou de maneira profunda a economia e a sociedade brasileira. A partir da década de 1990 o país adotou as proposições do neoliberalismo, que se expressaram em torno do chamado "Consenso de Washington". Os princípios neoliberais orientaram a formulação das políticas econômicas e parcela importante das mudanças institucionais implementadas no Brasil nas últimas décadas.

Os próprios governos do Partido dos Trabalhadores entre 2002 e 2016 se caracterizaram por políticas econômicas que combinavam elementos do neoliberalismo e do desenvolvimentismo.

Ao longo de quase todo os governos petistas houve o aumento da parcela salarial e redução da parcela dos lucros. O aumento da parcela salarial foi compensado pela expansão do nível de utilização da capacidade instalada até o início da década de 2010. A partir de 2011 houve um processo de esmagamento dos lucros que ocasionou a queda da rentabilidade e o aumento da animosidade dos capitalistas com o governo Dilma Rousseff. A política de estímulo do investimento privado com não funcionou devido a redução da taxa de lucro. Alguns erros de condução da política econômica também reduziram a capacidade do Estado brasileiro em fazer política desenvolvimentista.

O segundo mandato de Rousseff foi marcado pela preponderância de políticas macroeconômicas associadas ao neoliberalismo, com ênfase na austeridade fiscal e no corte de gastos. Contudo, o governo não se aventurou em direção a reformas institucionais que implicassem em rupturas com o contrato social estabelecido na Constituição de 1988. A adoção de um programa neoliberal pleno não estava nas possibilidades políticas de um governo petista. O resultado foi a queda do governo em 2016 e a retomada do neoliberalismo. As reformas de influência neoliberal e os impactos da crise da Covid-19 levaram à estagnação da relação capital físico por trabalhador desde meados da década de 2010.

O neoliberal tardio estava expresso no documento a "Ponte para o Futuro", lançado por Michel Temer, o vice-presidente do então Partido do Movimento Democrático Brasileiro, PMDB. Foram apresentadas um conjunto de propostas para a condução das políticas econômicas e de reformas institucionais que propunham modificações no orçamento federal, no mercado de trabalho, na previdência social e na estrutura tributária, além de reduzir a atuação das empresas estatais, especialmente da Petrobrás. A "Ponte para o Futuro" representava o rompimento do contrato social que prevaleceu na Constituição de 1988.

Com o impedimento da Pres. Dilma Rousseff houve a plena retomada do neoliberalismo no Brasil. O governo Temer aprofundou a política de austeridade com a contenção de gastos e implementou rapidamente as reformas propostas. Em 2016, foi aprovada a Emenda Constitucional 95, que instituiu o "Novo Regime Fiscal" que limita o crescimento dos gastos públicos. Em 2017, ocorreu a reforma do mercado de trabalho, a Lei nº 13.429 dispõe sobre trabalho temporário e altera as normas para terceirização de

atividades, por sua vez, a Lei nº 13.467 alterou a Consolidação das Leis do Trabalho, CLT. Ainda em 2016, no contexto dos efeitos da operação Lava-Jato, aprovou-se a Lei nº 13.365 que revogava a participação da Petrobrás na exploração de petróleo no pré-sal, abrindo espaço para as petrolíferas estrangeiras.

As reformas da previdência e tributária não foram implementadas devido à crise política. Eleito em 2018, o governo de Jair Bolsonaro avançou na implementação de políticas associadas ao neoliberalismo tardio. Houve continuidade das reformas, ao menos nove membros da equipe econômica que tomaram posse com Paulo Guedes, ministro da Economia, atuaram no governo Temer (AMANHÃ, 2018). O adjetivo tardio se refere ao fato de haver no contexto internacional está em curso um movimento de revisão de preceitos associados ao neoliberalismo.

As reformas neoliberais atingiram sua expressão máxima com a reforma da previdência com a Emenda Constitucional nº 103. Também foi aprovada a independência do Banco Central, além de marcos regulatórios que facilitam a gestão privada em áreas como a distribuição de gás natural e o saneamento. A privatização da Eletrobrás e a venda de diversos ativos da Petrobrás, como a BR distribuidora e um conjunto de refinarias completam um quadro que representa o aprofundamento do projeto neoliberal fora de época. A burguesia doméstica esperava a recuperação da lucratividade e o aumento do investimento com o retorno ao neoliberalismo.

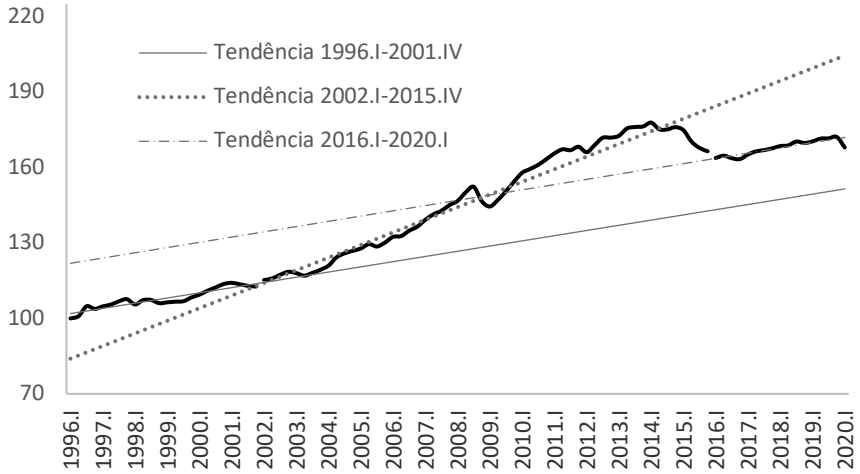
A figura 2 apresenta a trajetória da taxa de lucro e do investimento líquido entre 2000 e 2021. Observa-se entre 2000 e 2002 um movimento de queda da taxa de lucro sucedido por redução do investimento líquido. A partir de 2003 ocorreu o aumento da taxa de lucro e o crescimento defasado do investimento líquido até 2011. A partir de 2011, a taxa de lucro passou a cair, sendo seguida pelo investimento a partir de 2013. Entre 2015 e 2016, a taxa de lucro atingiu o ponto mínimo, passando a se recuperar nos anos seguintes. Apesar de melhora da taxa de lucro, o investimento líquido permaneceu negativo de 2016 a 2020. A guinada neoliberal não elevou a taxa de investimento e resultou em baixa taxa de crescimento.

**Figura 2 - A taxa de lucro líquida (r) e o investimento líquido (I) Brasil: 2000-2021**


Fonte: Marquetti et al. (2023)

A Figura 3 mostra as tendências de crescimento da economia brasileira entre o primeiro trimestre de 1996 e o primeiro trimestre de 2020. É possível observar três momentos. O primeiro, entre 1996.I e 2001.IV, teve baixo crescimento e correspondeu ao período de adoção do neoliberalismo no Brasil. O segundo período entre 2002.I e 2015.IV correspondeu aos governos petistas, quando houve uma combinação entre neoliberalismo e desenvolvimentismo e um certo dinamismo econômico. O terceiro momento, o neoliberalismo tardio, ocorreu uma ruptura com o padrão de crescimento do segundo período e um retorno a tendência observada na segunda metade da década de 1990. A taxa de crescimento da economia brasileira foi reduzida nos momentos de adoção plena do neoliberalismo. Cabe mencionar que a partir da COVID-19, no segundo trimestre de 2020, houve uma dinâmica de crescimento ainda mais modesta.

**Figura 3: O PIB e a tendência linear trimestral, Brasil: 1996.I-2020.I 1996=100**

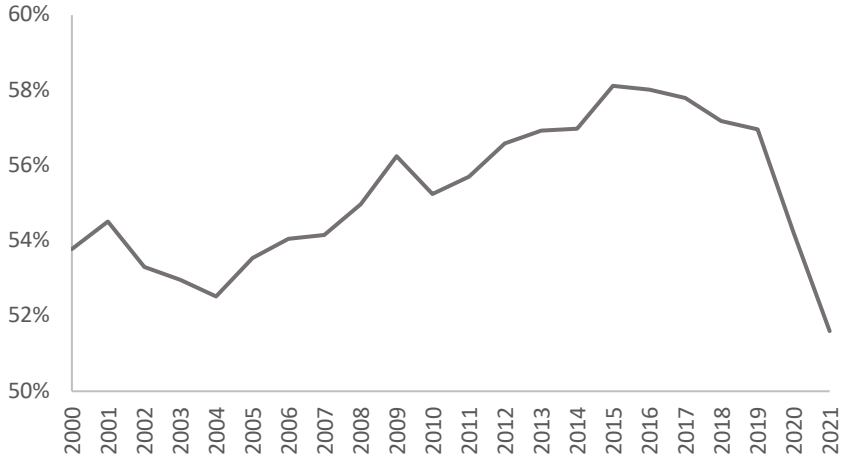



Fonte: CNT IBGE (2022)

As diferentes dinâmicas de crescimento econômico afetam o mercado de trabalho e a disputa entre trabalho e capital pelo valor adicionado. A figura 4 apresenta a parcela salarial entre 2000 e 2021. O período de maior crescimento econômico (2002-2015) e de redução da taxa de desemprego correspondeu a um processo de elevação da parcela salarial. Houve, um aumento do poder de barganha dos trabalhadores. Por sua vez, no neoliberalismo tardio houve queda da parcela salarial com a redução do custo do trabalho, a qual foi determinante na recomposição da lucratividade. A parcela salarial atingiu seu pico em 2015, caindo a partir de então, em especial, após 2019. Como a produtividade real do trabalho permaneceu estagnada, a queda da parcela salarial decorreu da redução do valor real da remuneração do trabalho.

A manutenção do neoliberalismo tardio implica em uma perspectiva de continuidade da "quase" estagnação nos próximos anos, com reduzido crescimento da produtividade do trabalho. A questão fundamental colocada para a sociedade brasileira é como construir, através do processo democrático, um novo arranjo institucional que propicie maior acumulação de capital físico e o crescimento da produtividade do trabalho em torno de 3% ao ano. Para isso, é fundamental aumentar a taxa de investimento para cerca de 25% ao ano.

**Figura 4: Parcela salarial, Brasil: 2000-2021**




Fonte: Miebach e Marquetti (2022)
Nota: Foram utilizadas informações da PNAD contínua para estimar 2020 e 2021

É necessário um projeto de desenvolvimento que promova uma nova articulação entre o estado e as empresas produtivas para propiciar a retomada crescimento econômico. O País deve definir os espaços de atuação das empresas públicas, das empresas privadas e multinacionais. Também é necessário recuperar os órgãos públicos, em especial, os capazes de promover o investimento. O BNDES deve financiar investimentos capazes de elevar a produtividade, induzindo a incorporação de progresso técnico no setor privado. Ao setor público e as empresas públicas caberia investir em setores intensivos em capital e em infraestrutura.

Para uma nova articulação, é necessário rever o papel do setor financeiro como lócus central da tomada de decisões na economia. É preciso aumentar o espaço político dos atores econômicos com maior comprometimento com o crescimento econômico. Tais atores teriam assim melhores condições de tomar as decisões de alocação de capital com horizontes de retorno mais longos. Por exemplo, em 2019, a indústria de transformação e a indústria de construção responderam por 84,9 porcento da formação bruta de capital fixo da economia brasileira.

Um novo projeto de desenvolvimento também requer reorganizar o funcionamento do Estado, recuperando sua capacidade de planejamento e de investimento. É preciso elevar a produtividade do setor público para aumentar a oferta de serviços e bens públicos para a população. Na reorganização estatal, é necessário a constituição de mecanismos democráticos de controle social, em particular, da população de menor renda sobre o estado que vão além do ato de votar.

## 4. A guisa de conclusão

Acelerar o desenvolvimento no século XXI requer da sociedade brasileira a recuperação da capacidade de construção de consensos sociais. O neoliberalismo e suas perspectivas axiomáticas apostam na ideia de ausência de alternativas, conforme o acrônimo adotado na década de 1980: TINA[1]. Essa perspectiva ajuda a compreender o porquê o neoliberalismo transita com desenvoltura em regimes democráticos de baixa intensidade e autoritários: não há necessidade de construir consensos sociais quando não há alternativa ao modelo econômico.

A superação do neoliberalismo tardio e a recuperação da dinâmica de crescimento implica inicialmente reconhecer a necessidade de crescimento econômico sustentável capaz de gerar melhorias na qualidade da vida. Existem necessidades prementes de avanços em emprego, educação, saúde e moradia. Ao mesmo tempo, a busca do desenvolvimento deve, de forma imprescindível se adequar as metas de sustentabilidade e preservação do meio ambiente. Avançar na construção de consensos acerca de tais objetivos é o desafio imediato para a retomada do crescimento econômico.

É importante perceber que a crise do neoliberalismo e o cenário internacional apresentam maiores graus de liberdade para países como o Brasil. Ao contrário de outros momentos, há atualmente maior abertura para novas possibilidades de atuação estatal e maior disputa sobre a organização de sociedades democráticas. Parcela maior da população brasileira está exaurida por conflitos, estagnação econômica e regressão na estrutura produtiva, o que abre espaço para novas possibilidades de negociação entre diversos segmentos da sociedade.

Existe a necessidade de formar um consenso político mínimo entre os diferentes setores sociais que possibilite a organização de instituições de cunho desenvolvimentista e o abandono do neoliberalismo. A sociedade deve ter mecanismos de controle do investimento produtivo de modo que a taxa de acumulação não dependa da taxa de lucro. A acumulação de capital possibilita a incorporação de progresso técnico e elevação da produtividade do trabalho que é fundamental para a melhora da qualidade de vida da população brasileira.

[1] *There is no Alternative* (Não há alternativa).

## Referência


Amanhã (2018), Nova equipe econômica terá 9 nomes do governo Temer. Disponível em: https://amanha.com.br/categoria/economia/nova-equipe-economica-tera-9-nomes-do-governo-temer . Acesso em: 20 de ago. 2022.

Atlantic Council, (2022), *The Biden White House plan for a new US industrial policy*. Disponível em: https://www.atlanticcouncil.org/commentary/transcript/the-biden-white-house-plan-for-a-new-us-industrial-policy/. Acesso em: 12/09/2022.

Barro, R., Lee, J. (2013), A New Data Set of Educational Attainment in the World, 1950-2010. *Journal of Development Economics*, 104: 184-198. Disponível em: <http://www.barrolee.com>. Acesso em: 6/8/2022. DOI: https://doi.org/10.1016/j.jdeveco.2012.10.001

Marquetti, A; Maldonado Filho, E.; Miebach, A; Morrone, H. (2023), Uma interpretação da economia brasileira a partir da taxa de lucro: 1950-2020. *Brazilian Journal of Political Economy*. No prelo.

Miebach, A.; Marquetti, A; (2022), A distribuição funcional da renda no Brasil: 1947-2019. *Nova Economia*. DOI: https://doi.org/10.1590/0103-6351/7434

Pritchett, L. (2001), Where has all the education gone? *World Bank Economic Review*, 15(3): 367-91. DOI: https://doi.org/10.1093/wber/15.3.367

# BOOK REVIEW - BKR

## The Economics of John Maynard Keynes

Fernando Ferrari Filho*

As is well known, the Great Depression, in the 1930s, changed the economic theory and economic policy. At that time, the Neoclassical theory and orthodox economic policies were replaced, theoretically and empirically, respectivelly, by the Keynesian theory, after publication, in 1936, of *The General Theory of Employment, Interest and Money* (GT), by John Maynard Keynes, and the "New Deal" in the United States. From then and until the beginning of the 1970s, Keynesian Economics and its countercyclical economic policies, mainly fiscal and monetary, were fundametal to expand effective demand and, as a result, to sustain the economic growth and income distribution of the world economy over time.

In the late 1960s and middle of the 1970s, the Keynesian theory suffered attack from two similar schools of economic thought: Monetarism and New-Classical. In short, the Monetarists used to argue that, given that in the long run changes in the money supply affects only the price level, central banks should manage/control the money supply over time once the economy tends to its natural rate of employment with a steady rate of inflation, and, on the other hand, as well as they advocate a free-market capitalism, while the New-Classicals incorporated rational expectation hypothesis into macroeconomic models and criticized Keynesian economists because they could not provide a logical explanation for the stagflation process in the 1970s.

The reaction to the Monetarism and New-Classical schools came with the Post-Keynesians who were focused, on the one hand, on rebuilding economic theory in the light of main Keynes' ideas and insights related to GT and *A Treatise on Money*, among others, and, on the other hand, on confronting the Neo-Classical Economics that became dominant in macroeconomic at the end of the 1970s.

The Post-Keynesian theory was successful in rescuing and strengthening Keynesian theory, however, unfortunately, the mainstream economics and policy makers around the world became highly influenced by supply-side economics, liberal reforms and New Consensus Macroeconomics.

* Retired Professor of Economics at the Federal University of Rio Grande do Sul and former President of the Brazilian Keynesian Association

The international financial crisis (IFC), 2007–2008, and, recently, the COVID-19 crisis, 2020-2022, not only put mainstream economics and policymakers in the spotlight, but also brought Keynesian theory and its countercyclical economic policies back into the economic debate.

The Fábio Terra's book, **The Economics of John Maynard Keynes** (2023), as the author states, "aims to present the economic theory of [Keynes] in a straightforward and simple manner" (Terra, 2023, p.1). But even more importantly, this book is a guide to Keynes for students, undergraduate and graduate, and economists who have has difficulty understanding the main Keynes' ideas and insights related to the role of money in the economic activity, expectations and uncertainty, economic policies – specially, fiscal policy – , international monetary system, and so on.

The book has four parts.

In Part I, Terra presents the Keynes' thought foundations, that is, his ideas and insights concerning probability and a controversial topic to Keynesian theory, that is, method. According to the author, uncertainty and method to explain the economic and social phenomenon are related because the theory of knowledge Keynes developed in his *A Treatise on Probability* is anchored in induction or reasoning, which Keynes used to describe the economic agents' behavior and the logic of the economic system.

In the next Part, the author analyses the role of money in *A Tract on Monetary Reform* and *A Treatise on Money*. In the fisrt one, more specifically on Chapter 3, Terra describes the Keynes' idea that, in the short-run, money is not neutral, while in *A Treatise on Money* he shows how is developed the Keynes' asset choice theory that aims at connecting the real and financial markets to describe, as Keynes (1930/1976, vol.1, p.v) "the dynamical laws governing the passage of a monetary system from one position of equilibrium to another" – specifically, disequilibrium situations, such as: economic *boom* and inflation, if investmente is greater than saving, and if saving is greater than investment there are recession and deflation.

In Part III, with 8 chapters, Terra explores the main propositions presented in the GT that, implicitly, describe the *modus operandis* a monetary economy: (i) Income determination and multiplier/marginal propensity to consume; (ii) Investment theory or marginal efficiency of capital; and (iii) Theory of interest rate, that is, liquidity preference. These propositions explain that, according to Keynes (1936/2007, p.vii), "[a] monetary economy [...] is essentially one in which changing views about the future are capable of influencing the quantity of employment and not merely its direction."

Finally, in Part IV, called "Beyond GT", Terra discusses the goals of the main macroeconomic countercyclical policies, such as fiscal, monetary and exchange rate, as well as analyses two important topics, not only on Keynesian Economics, but also in nowadays, that are the function of the State in the capitalism system and the idea of economic and social development. In terms of macroeconomic coutercyclical policies, there is no doubt that without them the world economic crisis during the IFC and the COVID-19 crisis would be worse. Thus, Terra shows how they are necessary to mitigate the instability of the capitralism system. Considering that Keynes' monetary economy argues that capitalism is inherently unstable, Terra argues that State should exercise its function as regulator, coordinator and inducer of economic activity. Going in the same direction, according to Keynes (1936/2007, p.378), State has to "exercise a [...] comprehensive socialization of investment". In terms of development, an obscure topic in Keynesian theory, Terra, according to his interpretation of the Keynes' books and articles, believes that economic and social development, in Keynes' view, should be related to sustainable economic growth, full employment and income distribution. Therefore, the love of money must be replaced by the love of living.

Last but not least, I would like to say that Terra was one of the best graduate students I had in my academic life. Moreover, it was my pleasure to be his advisor in his PhD thesis and, since then, we have published several articles, book chapters and organized a book about Keynes. To conclude, considering that Terra is a very close friend, I would like to quote Lennon & McCartney (1965): "There are places [and friends] I remember All my life [...] some have changed [...] Some have gone and some remain".

**References**

Keynes, J.M. (1930/1976), *A Treatise on Money*. New York: AMS Press.

_____ (1936/2007), *The General Theory of Employment, Interest and Money*. London: Palgrave Macmillan.

Terra, F.H.B. (2023), *The Economics of John Maynard Keynes*. London: Routledge.

The Beatles (1965), *In my Life*. London: Rubber Soul.

# Macroeconomics after Kalecki and Keynes: Post-Keynesian Foundations.*

*The eBook version is priced from £20/$26 from eBook vendors while in print the book can be ordered from the Edward Elgar Publishing website.*

**Ricardo Summa†**

It is great news for the Heterodox community the release of the new textbook by Eckhard Hein. I had the difficult task of finishing my review just after the release of an excellent summary of the book provided by Marc Lavoie. I will try to take advantage of Lavoie's (2023) careful review, which I strongly recommend, by making a shorter overall summary of the book. I will highlight some interesting features of the book, such as the policy-oriented perspective and the capacity to build bridges within the post-Keynesian community and with other Heterodox perspectives.

I was quite lucky to spend a year as a visiting researcher at IPE Berlin in 2021-2022, in contact with Hein, in the perfect timing when the book was about to be sent to publication. So I had the chance not only to read the draft chapters, but also to see the use of it (i) for teaching, as I watched some of his classes, at the graduate program at the Berlin School of Economics and Law and at the FMM Summer School; and (ii) for moving forward his research agenda, as I was also in contact with his group, composed mainly by PhD students and Post-Doc fellows. Therefore, I will also explore the importance of the book for teaching and training researchers.

Finally, as the book review is for the Brazilian Keynesian Review, I will also mention the references to the Brazilian post-Keynesian community that we can find in the book.

* This book review has benefited from discussions with Franklin Serrano and Nathalie Marins. The author gratefully acknowledges the financial support in the form of research grant from the Brazilian National Council for scientific and Technological Development (CNPq)
† Professor of Economics at Federal University of Rio de Janeiro (UFRJ). Contact: ricardo.summa@ie.ufrj.br.

## 1. Brief Summary

The book is composed by 10 chapters, with chapter one being an introduction that makes clear the policy-oriented character of the book, and the objective of providing a post-Keynesian alternative to the "New Consensus Model". The core of the book consists of chapters 4 to 6, where an integrated stock-flow Kaleckian model is provided for the determination of output and prices in the short-run (given capital stock), to discuss the role of macroeconomic policies.

Chapter 4 builds the Kaleckian model with fixed prices. It starts with simple stock-flow accounting and then assumes that firms set prices by marking-up over unit direct costs, that functional distribution is exogenous, and that effective demand determines output (and capacity utilization). Moreover, workers' consumption is determined by contractual wages and rentiers consumption depends on the interest paid on debt. The latter is derived explicitly from the stock-flow accounting, while investment includes an accelerator effect, besides the animal spirits and interest rate. The model is then extended to include the government sector and the external sector. Finally, the model also accommodates wage inequality (both in the general case and for the gender gap).

Chapter 5 relaxes the assumption of fixed prices to include conflict inflation into the model. The conflict inflation model starts with quite consensual Kaleckian foundations, such as mark-up pricing over unit labour costs and consequently the necessity of changes in the real mark-up to change the functional income distribution. Firms change prices to achieve a target profit share, while workers change its nominal wages to achieve a target wage share. Conflict inflation arises when the workers' target wage share is greater than the wage share that corresponds to the firms´ target profit share. Moreover, the target workers' wage share is assumed to depend on the level of employment, as reflecting workers' bargaining power.

Hein criticizes the closure proposed by Lavoie-Blecker-Setterfield, which assumes that expected inflation is not fully incorporated into nominal wage inflation. According to him, it is implausible that workers systematically underestimate inflation expectations. This assumption is crucial to the results of Lavoie-Blecker-Setterfield: stable inflation and distribution, where a higher employment level is associated with a higher but stable inflation and wage share.

He then builds on Hein-Stockhammer version, where the solution for the conflict to influence distribution is via a partial pass-through from increases in wage growth to inflation,

and the closure for distribution is made in terms of unexpected inflation. I tend to agree with Lavoie (2023) that this solution may be "a hard read for students", and that in the end the two post-Keynesian ways of modelling conflict inflation leads to similar predictions. This part of Chapter 5 however calls attention to the importance of the theoretical debate on how partial adjustments of mark-up and wages can led to different inflation dynamics and distribution, and certainly will generate further discussion. This debate seems even more important in view of the recent popularity of the idea of profit-led inflation.

The rest of chapter 5 incorporates the changes in inflation that arises from conflict into the model of chapter 4. Changes in inflation feeds back into aggregate demand via changes in distribution and the real interest rate. Using this framework, the chapter then explores the appropriate macroeconomic policies and concludes that fiscal (government spending), rather than monetary policy, is preferable. Chapter 6 addresses the policy prescription of chapter 5 considering an extensive post-Keynesian literature on macroeconomic policy mix, including income policies and the constraints arising from the external sector.

The rest of the book gravitates around these core chapters. Chapters 2 and 3 provide the foundations of post-Keynesian theory applied in the Kaleckian models of chapters 4-6. Specifically, chapter 2 presents the history of post-Keynesian thought and of post-Keynesian institution building, while chapter 3 explains the principle of effective demand and its relation with endogenous money, credit, and finance. Chapters 7 to 9 extend the analysis to the long run, by allowing capital accumulation. Chapter 7 discusses in a comparative way simple models of growth from neoclassical, Marxists, and post-Keynesian traditions. Chapters 8 and 9 addresses respectively some financial and ecological constraints to growth and accumulation. Chapter 10 briefly explores some perspectives for the post-Keynesian agenda, calling for cooperation with other heterodox schools, engagement with political groups and organized sectors of the society, and for an effort in building the post-Keynesian "infrastructure", with the final objective of influencing policy.

## 2. Five important features

### 2.1 Open economy, policy-oriented

In my opinion, one important feature of the book is that it incorporates, in an analytical and integrated way, the external and public sectors into a post-Keynesian model. It then uses it to discuss the role of macroeconomic policies, as an attempt to provide an

alternative to the "New Consensus model". It also tackles from a post-Keynesian perspective more contemporary problems, like the ones caused by "finance-dominated capitalism" and the climate change. The book is thus very policy-oriented, but with a strong theoretical background behind these policy proposals.

### 2.2 Building bridges

A second important feature of the book is that, despite the option for specific closures with more Kaleckian flavour in the core models of the book, it provides another important step to build bridges between all the post-Keynesian strands (as well as with other heterodox schools).

Chapter 2 follows the 'the big tent' approach for post-Keynesian economics and 'focusses on the commonalities rather than the differences' (p.11) of five strands – Fundamentalists, Kaleckians, Kaldorians, Sraffians and Institutionalits. Chapter 3 goes in this direction by putting emphasis on the fact that the Principle of Effective Demand is closely related with autonomous creation of purchasing power, via endogenous money and finance. This chapter also shows the contributions not only of Kalecki and Keynes, but also from Marx, to the analysis of 'monetary production economies'.

Chapters 4 and 5 call attention about different (and separable) determinants for prices and quantities, and thus the importance of cost-push and conflict inflation. These three general foundations (i.e., effective demand, endogenous money, and conflict inflation), seem to be increasingly accepted by all post-Keynesian strands. Of course, there is still disagreements with specific behavioral equations and closures, but it seems to me that the agreement on these three principles have made the recent debate between the different post-Keynesian strands much more constructive than it was before. Hein's book, thus, seems to reinforce this constructive perspective.

The book also dialogues with other heterodox schools, such as the Feminist Economics (chapter 4), Marxists (chapter 7), Comparative Political Economy (chapter 8), Ecological Economics (chapter 9), and others.

### 2.3 Teaching

A third good quality of the book is that it is very well edited, the variables are harmonized and consistent throughout the book, and there is a list of variables provided in the front section. Also, most of the chapters are quite simple, and easy to follow (with the

exceptions of chapters 4 and 5). This makes the reading of the book, despite its theoretical density, quite pleasant.

The clarity in the exposure is reflected in many remarkable parts of the book, that I would like to stress. In chapter 3 we can find a very clear and didactical exposition of the monetary and credit 'circuits'. In chapter 6, the many interconnections between Hein's policy recommendations derived from chapters 4 and 5 and the post-Keynesian literature on policy mix is very well tied. Chapter 7 is also quite direct, and the author presents many growth theories and its results using only one equation. We can find many more examples in the book.

For these qualities, I think the book can be a useful tool for teaching, and to become part of the basic bibliography of many post-Keynesian graduate courses. In post-Keynesian Graduate courses specially devoted to train the students in the Kaleckian model (more also on this, below) and its theoretical, empirical, or policy-oriented applications, the book can be the main reference. However, parts of it can also be used as basic reference in other graduate courses, not so focused in the Kaleckian strand. This is the case of chapters 2, 3 and 6 which can be important references for courses in Foundations to post-Keynesian Economics, and chapters 7, 8 and 9 which can be used in courses of growth and distribution.

**2.4 Training researchers**

A fourth feature of the book is the capacity to provide a systematic method to train researchers. The baseline model of chapter 4 is quite complex and presents many possible outcomes, as some variables have multiple impacts on the economy. As an example, the interest rate may affect the mark-up (and distribution), but also consumption out of debt and investment. Consequently, the net impact on output is *a priori* indetermined since the result depends on the value of the parameters.

The economy can thus be wage-led, profit-led, debt-led, and including public and external sector brings more complexity to the model. Other possible outcomes arise with the inclusion of conflict inflation in chapter 5. Therefore, the analysis opens space for a research agenda to explore these many possible paths. Together with the baseline models, the book provides extensive surveys pointing in many directions through which the literature has advanced, providing insights on possibilities to be explored.

I had the opportunity to watch some classes by Hein at the master program at Berlin School of Economics and Law in which he gave exercises for the students to think in terms of the models of (at that time, draft of) chapter 4, and to explore the results and reflect on

possible ways to apply them. The response of the students was very good, as they seem to reason using the models. This method seems to have influenced many high qualities master dissertations and PhD thesis, and this strategy can be said to be successful given the wide production in co-authorship with his students (many of them listed in the references in the book).

The training in more complex models and its development from the inclusion of more feedbacks and relations, however, requires some caution. Even the "New Consensus" is constituted by a set of models, from simple Toy Models to more complex DSGEs, where the former can be "illuminating" to "present the essence of the answer from a more complicated model or from a class of models" (Blanchard, 2018, p.53). Therefore, my advice to the ones that will follow this track is to ever keep an eye on simple (post-Keynesian) toy models. A good example of simple and policy-oriented alternative to the "three-equation New Consensus Model" is provided by Hein himself in a recent book with co-authors (Prante et al 2022).

### 2.5 Source of references

A final remarkable achievement of the book is the huge number of good references. The bibliography of the book has 40 pages with more than one thousand references. They include theoretical, empirical, and policy-oriented books and papers, from the many subjects discussed in the book, mostly from post-Keynesian authors. This is another contribution and certainly will be very useful as a reference for both graduate students and senior researchers.

## 3. The contribution from Brazilian authors

Finally, we should notice that the Brazilian post-Keynesian community is recognized in Hein's book many times: as part of the post-Keynesian infrastructure, the several Graduate heterodox programs, such as UFRJ and Unicamp (p.25); the Brazilian Journal of Political economy (p.24); The Brazilian Keynesian Association (AKB) and its annual conference (p.24). Also, the contribution from scholars from Brazilian Universities are listed in the reference, with an additional emphasis to two ideas that has Brazilian Scholars as pioneers: the International Currency Hierarchy (pgs 196fn33, p.210), as a constraint to monetary policy in open economies, with reference to Daniela Prates and Luiz Fernando de Paula; and the Sraffian Supermultiplier, as an alternative closure to demand-led growth models, with reference to Franklin Serrano and Fabio Freitas (p. 17, 220, 234–8, 236–8, 239, 241fn6).

## 4. Final remarks

Not that long ago, in 2003 I started my master's degree in economics at the Federal University of Rio de Janeiro. I remember my only course based on a post-Keynesian textbook (Taylor, 1991) was ministered by Nelson Barbosa-Filho, and the other many post-Keynesian and heterodox courses were based mainly on original articles and books. I remember also reading the draft of Godley and Lavoie (2007) just before starting my PhD in 2007, recommended by Franklin Serrano. But my PhD courses in 2007 were basically based on original articles as references.

It is delightful to see in less than ten years a rapid improvement in this part of the post-Keynesian infrastructure: the textbooks. We can refer at least to Lavoie (2022), which first edition was launched in 2014, Hein (2014) and Blecker and Setterfield (2019). They are very important to the diffusion of the post-Keynesian knowledge and nowadays I think it is difficult to find a post-Keynesian graduate course which does not include part of them in the basic bibliography.

The recent book of Hein (2023) contributes enormously to this effort of systemizing and disseminating the post-Keynesianism. Its extensive research, the policy-oriented character and the incorporation of new subjects makes it complementary to the other textbooks. It is certainly a great addition to the post-Keynesian infrastructure and students today are certainly much better equipped with tools to move forward the post-Keynesian research agenda.

## References


Blanchard, O. (2018), "On the future of macroeconomic models." Oxford Review of Economic Policy 34.1-2: 43-54.

Blecker, R. and Setterfield, M. (2019), Heterodox Macroeconomics: Models of Demand, Distribution and Growth, Cheltenham, UK: Edward Elgar Publishing.

Godley, W., Lavoie, M. (2007): Monetary Economics: An Integrated Approach to Credit, Money, Income, Production and Wealth, Palgrave Macmillan, Basingstoke.

Hein, E. (2014), Distribution and Growth after Keynes: A Post-Keynesian Guide, Cheltenham, UK: Edward Elgar Publishing.

Hein, E. (2023), Macroeconomics after Kalecki and Keynes: Post-Keynesian Foundations. Edward Elgar Publishing.

Lavoie, M. (2022), Post-Keynesian Economics: New Foundations, Cheltenham, UK: Edward Elgar Publishing.

Lavoie, M. (2023), Macroeconomics after Kalecki and Keynes: Post-Keynesian Foundations: by Eckhard Hein. Review of Political Economy (advanced access).

Prante, F., Bramucci, A., Hein, E. and Truger, A. (2022), Introduction to Macroeconomics: Pluralist and Interactive, Berlin: HWR Berlin, https://eng.mgwk.de/.

Taylor, L. (1991), Income Distribution, Inflation, and Growth: Lectures on Structuralist Macroeconomic Theory, Cambridge, MA, and London: MIT Press.